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AMERICA

PICTURESQUE AND DESCRIPTIVE

INDEPENDENCE HALL, PHILADELPHIA

AMERICA

PICTURESQUE & DESCRIPTIVE : *By* JOEL COOK
IN THREE VOLUMES : WITH ILLUSTRATIONS IN COLOR

VOLUME ONE

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VOLUME ONE

FULL PAGES IN COLOR

INDEPENDENCE HALL, PHILADELPHIA

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INTRODUCTION.

THE American is naturally proud of his country, its substantial growth and wonderful development, and of the rapid strides it is making among the foremost nations of the world. No matter how far elsewhere the American citizen may have travelled, he cannot know too much of the United States, its grand attractions and charming environment. Though this great and vigorous nation is young, yet it has a history that is full of interest, and a literature giving a most absorbing story of rapid growth and patriotic progress, replete with romance, poetry and a unique folklore.

The object of this work is to give the busy reader in acceptable form such a comprehensive knowledge as he would like to have, of the geography, history, picturesque attractions, peculiarities, productions and most salient features of our great country. The intention has been to make the book not only a work of reference, but a work of art and of interest as well, and it is burdened neither with too much statistics nor too intricate prolixity of description. It covers the Continent of North

America, from the Atlantic to the Pacific, and from the Gulf of Mexico to the Canadian Dominion and Alaska. It has been prepared mainly from notes specially taken by the author during many years of extended travel all over the United States and Canada. A method of treatment of the comprehensive subject has been followed which is similar to the plan that has proved acceptable in "England, Picturesque and Descriptive." The work has been arranged in twenty-one tours, each volume beginning at the older settlements upon the Atlantic seaboard; and each tour describing a route following very much the lines upon which a travelling sightseer generally advances in the respective directions taken. The book is presented to the public as a contribution to a general knowledge of our country, and with the hope that the reader, recognizing the difficulties of adequate treatment of so great a subject, may find in the interest it inspires, an indulgent excuse for any shortcomings.

J. C.

PHILADELPHIA, September, 1900.

THE ENVIRONMENT OF CHESAPEAKE BAY.

AMERICA,

PICTURESQUE AND DESCRIPTIVE.

I.

THE ENVIRONMENT OF CHESAPEAKE BAY.

The First Permanent Settlement in North America—Captain John Smith—Jamestown—Chesapeake Bay—The City of Washington—The Capitol—The White House—Elaborate Public Buildings—The Treasury—The State, War and Navy Departments—The Congressional Library—The Smithsonian Institution—Prof. Joseph Henry—The Soldiers' Home—Agricultural Department—Washington Monument—City of Magnificent Distances—Potomac River—Allegheny Mountains—The Kittatinny Range—Harper's Ferry—John Brown—The Great Falls—Alexandria—Mount Vernon—Washington's Home and Tomb—Washington Relics—Key of the Bastille—Rappahannock River—Fredericksburg—Mary Ball, the Mother of Washington—York River—The Peninsula—Williamsburg—Yorktown—Cornwallis' Surrender—James River—The Natural Bridge—Lynchburg—Appomattox Court-House—Lee's Surrender—Powhatan—Dutch Gap—Varina—Pocahontas—Her Wedding to Rolfe—Her Descendants, the "First Families of Virginia"—Deep Bottom—Malvern Hill—General McClellan's Seven Days' Battles and Retreat—Bermuda Hundred—General Butler—Shirley—Appomattox River—Petersburg—General Grant's Headquarters—City Point—Harrison's Landing—Berkeley—Westover—William Byrd—Chickahominy River—Jamestown Island—Gold Hunting—The Northwest Passage—First Corn-Planting—Indian Habits—First House of Burgesses—Tobacco-Growing—Virginia Planters—Importing Negro Slaves—Newport News—

Merrimac and Monitor Contest—Hampton Roads—Hampton—Old Point Comfort—Fortress Monroe—Fort Algernon—Fort Wool—Elizabeth River—Norfolk—Portsmouth—Great Dismal Swamp—The Eastern Shore—The Oyster Navy—William Claiborne—Kent Island—Lord Baltimore—The Maryland Palatinate—Leonard Calvert's Expedition—St. Mary's—Patuxent River—St. Inigoe's—Severn River—Annapolis—United States Naval Academy—Patapsco River—Baltimore—Jones's Falls—Washington Monument—Battle Monument—Johns Hopkins and his Benefactions—Baltimore and Ohio Railroad—Druid Hill—Greenmount Cemetery—Fort McHenry—The Star-Spangled Banner.

CAPTAIN JOHN SMITH.

When Captain Christopher Newport's expedition of three little ships and one hundred and five men, sent out by the "Virginia Company" to colonize America, after four months' buffeting by the rough winter storms of the North Atlantic, sought a harbor of refuge in May, 1607, they sailed into Chesapeake Bay. These three little ships were the "Susan Constant," the "Good Speed" and the "Discovery;" and upon them came Captain John Smith, the renowned adventurer, who, with Newport, founded the first permanent settlement in North America, the colony of Jamestown. The king who chartered the "Virginia Company" was James I., and hence the name. As the fleet sailed into the "fair bay," as Smith called it, the headlands on either side of the entrance were named Cape Charles and Cape Henry, for the king's two sons. Their first anchorage was in a roadstead of such attractive character that they named the ad-

jacent land Point Comfort, which it retains to this day; and farther inland, where Captain Newport afterwards came, in hopes of getting news from home, is now the busy port and town of Newport News. Sir Walter Raleigh, in the previous century, had sent out his ill-starred expedition to Roanoke, which had first entered this great bay; and at the Elizabeth River, which they had named in honor of Raleigh's queen, they found the Indian village of Chesapik, meaning "the mother of waters;" and from this came the name of Chesapeake Bay. Raleigh had landed colonists here, as well as at Roanoke, and when the "Virginia Company" sent out Newport's expedition it laid three commands upon those in charge: First, they were to seek Raleigh's lost colonists; second, they were to find gold; and third, they were to search for the "northwest passage" through America to the Pacific Ocean. So strong was the belief in finding gold in the New World that the only consideration King James asked for his charter was the stipulation that the "Virginia Company" should pay him one-fifth of the gold and silver found in its possessions.

As none of Raleigh's colonists could be found, the expedition sailed up the James River after considerable delay, and, selecting a better place for a settlement, landed at Jamestown May 13, 1607, where Smith became their acknowledged leader, and preserved the permanency of the colony. This famous

navigator and colonist was a native of Willoughby, in Lincolnshire, England, born in January, 1579. When scarcely more than a boy he fought in the wars of Holland, and then he wandered through Europe and as far as Egypt, afterwards returning to engage in the conflict against the Turks in Hungary. Here he won great renown, fighting many desperate combats, and in one engagement cutting off three Turks' heads; but he was finally wounded and captured. The sober, investigating historians of a later day have taken the liberty to doubt some of Smith's wonderful tales of these remarkable adventures, but he must have done something heroic to season him for the hardy work of the pioneer who was the first to succeed in planting a colony in North America. After the Turks made him a prisoner, he was sold as a slave in Constantinople, being condemned to the hardest and most revolting kinds of labor, until he became desperate under the cruelties and escaped. Then he was for a long time a wanderer through the wilderness, traversing the forests of Russia, and pushing his way alone across Europe, until, almost worn out with fatigue and hardships, he arrived in England just at the time Newport's expedition was being fitted out; and still having an irrepressible love for adventure, he joined it.

CHESAPEAKE BAY.

There can be no better place for beginning a survey of our country than upon this great bay, which

Smith and his companions entered in 1607. Chesapeake Bay is the largest inland sea on the Atlantic Coast of the United States. It stretches for two hundred miles up into the land, between the low and fertile shores of Virginia and Maryland, both of which States it divides, and thus gives them valuable navigation facilities. In its many arms and estuaries are the resting-places for the luscious oysters which its people send all over the world. It is one of the greatest of food-producers, having a larger variety of tempting luxuries for the palate than probably any other region. Along its shores and upon its islands are numberless popular resorts for fishing and shooting, for its tender and amply-supplied water-foods attract the ducks and other wild fowl in countless thousands, and bring in shoals of the sea-fishes, which are the sportsmen's coveted game. Its terrapin are famous, while its shores and borderlands, particularly on the eastern side, are a series of orchards and market-gardens, providing limitless supplies of fruits, berries and vegetables for the Northern markets. It receives in its generally placid bosom some of the greatest rivers flowing down from the Allegheny Mountains. The broad Susquehanna, coming through New York and Pennsylvania, makes its headwaters, and it receives the Potomac, dividing Maryland from Virginia, and the James, in Virginia, both of them wide estuaries with an enormous outflow; and also numerous smaller streams,

such as the Rappahannock, York, Patuxent, Patapsco, Choptank and Elizabeth Rivers. Extensive lines of profitable commerce, all large carriers of food-supplies, have transport over this great bay and its many arms and affluents. Canals connect it with other interior waters, and leading railways with all parts of the country, while there are several noted cities upon its shores and tributaries.

THE CITY OF WASHINGTON.

The most famous of all these cities of the Chesapeake region is Washington, upon the Potomac, and we will therefore begin this story at the American National Capital. The striking thing about Washington is that, unlike other capitals of great nations, it was created for the sole purpose of a seat of government, apart from any question of commercial rank or population. It has neither manufactures nor commerce to speak of. After the adoption of the Federal Constitution there was a protracted conflict in Congress over the claims of rival localities for the seat of government, and this developed so much jealousy that it almost disrupted the Union at its inception. General Washington, then the President, used his strong influence and wise judgment to compromise the dispute, and it was finally decided that Philadelphia should remain the capital for ten years, while after the year 1800 it should be located on the Potomac River, on a site selected by Washington,

within a district of one hundred square miles, ceded by Maryland and Virginia, and which, to avoid any question of sovereignty or control, should be under the exclusive jurisdiction of Congress. The location was at the time nearly in the geographical centre of the then thirteen original States. As the city was designed entirely on the Maryland side of the Potomac, the Virginia portion of the "Federal District of Columbia," as it was called, was retroceded in 1826, so that the District now contains about sixty-five square miles. The capital was originally called the "Federal City," but this was changed by law in 1791 to the "City of Washington." The ground plan of the place was ambitious, and laid out upon an extensive undulating plateau bordered by rolling hills to the northward and westward, and sloping gently towards the Potomac River, between the main stream and the eastern branch, or Anacostia River. This plan has been well described as "a wheel laid upon a gridiron," the rectangular arrangement of the ordinary streets having superimposed upon it a system of broad radiating avenues, with the Capitol on its hill, ninety feet high, for the centre. The Indians called the place Conococheague, or the "roaring water," from a rapid brook running through it, which washed the base of the Capitol Hill, and was afterwards very properly named the Tiber, but has since degenerated into a sewer. A distinguished French engineer of the time, Major

L'Enfant, prepared the topographical plan of the city, under the direction of Washington and Jefferson, who was Secretary of State; and Andrew Ellicott, a prominent local surveyor, laid it out upon the ground. The basis of the design was the topography of Versailles, but with large modifications; and thus was laid out the Capital of the United States, which a writer in the *London Times*, some years ago, called "the city of Philadelphia griddled across the city of Versailles."

The original designers planned a city five miles long and three miles broad, and confidently expected that a vast metropolis would soon be created, though in practice only a comparatively limited portion was built upon, and this is not where they intended the chief part of the new city to be. Of late years, however, the newer portions have been rapidly extending. No man's name was used for any of the streets or avenues, as this might cause jealousy, so the streets were numbered or lettered and the avenues named after the States. The corner-stone of the Capitol was laid in 1793, its front facing east upon the elevated plateau of the hill, and the town was to have been mainly built upon this plateau in front of it. Behind the Capitol, on its western side, the brow of the hill descended rather sharply, and here they laid out a wide and open Mall, westward over the lower ground to the bank of the Potomac River, more than a mile away. Off towards the

northwest, at the end of one of the diagonal avenues, they placed the Executive Mansion, with its extensive park and gardens stretching southward to the river, and almost joining the Mall there at a right angle. The design was to have the city in an elevated and salubrious location, with the President secluded in a comfortable retreat amid ample grounds, but nearly a mile and a half distant in the rural region. But few plans eventuate as expected; and such is the perversity of human nature that the people, when they came to the new settlement, would not build the town on Capitol Hill as had been intended, but persisted in settling upon the lower ground along and adjacent to the broad avenue leading from the Capitol to the Executive Mansion; and there, and for a long distance beyond the latter to the northward and westward, is the city of Washington of to-day. Pennsylvania Avenue, one hundred and sixty feet wide, joining these two widely-separated Government establishments and extending far to the northwest, thus became the chief street of the modern city. To Washington the Federal Government was removed, as directed by law, in 1800, the actual removal being conducted by Tobias Lear, who had been President Washington's private secretary, and was then serving in similar capacity for President John Adams. He packed the whole archives and belongings of the then United States Government at Philadelphia in twenty-eight wooden boxes, loaded

them on a sloop, sailed down the Delaware, around to the Chesapeake, and up the Potomac to the new capital, and took possession. The original Capitol and Executive Mansion were burnt by the British during their invasion in 1814, when Washington had about ten thousand population; it now contains over three hundred thousand, of whom fifty thousand are army and navy officers and civil servants and their families, and about eighty thousand are colored people.

THE CAPITOL.

The crowning glory of Washington is the Capitol, its towering dome, surmounted by the colossal statue of America, being the prominent landmark, seen from afar, on every approach to the city. The total height to the top of the statue is three hundred and seventy-five feet above the Potomac River level. The grand position, vast architectural mass and impressive effect of the Capitol from almost every point of view have secured for it the praise of the best artistic judges of all countries as the most imposing modern edifice in the world. From the high elevation of the Capitol dome there is a splendid view to the westward over the city spread upon the lower ground beyond the base of Capitol Hill. Diagonally to the southwest and northwest extend two grand avenues as far as eye can see—Maryland Avenue to the left leading down to the Potomac, and carrying the line of the Pennsylvania Railroad to the river, where it crosses

over the Long Bridge into Virginia; and Pennsylvania Avenue to the right, stretching to the distant colonnade of the Treasury Building and the tree-covered park south of the Executive Mansion. Between these diverging avenues and extending to the Potomac, more than a mile away, is the Mall, a broad enclosure of lawns and gardens. Upon it in the foreground is the Government Botanical Garden, and behind this the spacious grounds surrounding the Smithsonian Institution; while beyond, near the river bank, rises the tall white shaft of the Washington Monument, with its pointed apex.

On either side spreads out the city, the houses bordering the foliage-lined streets, and having at frequent intervals the tall spires of churches, and the massive marble, granite and brick edifices that are used for Government buildings. In front, to the west, is the wide channel of the Potomac, and to the south and southeast the Anacostia, their streams uniting at Greenleaf's Point, where the Government Arsenal is located. On the heights beyond the point, and across the Anacostia, is the spacious Government Insane Asylum. Far away on the Virginia shore, across the Potomac, rises a long range of wooded hills, amid which is Arlington Heights and its pillared edifice, which was the home of George Washington Parke Custis, the grandson of Mrs. Washington and General Washington's adopted son, and was subsequently the residence of General Robert E. Lee, who married

Miss Custis. Spreading broadly over the forest-clad hills is the Arlington National Cemetery, where fifteen thousand soldiers of the Civil War are buried. At the distant horizon to the left rises the spire of Fairfax Seminary, and beyond, down the Potomac, is seen the city of Alexandria, the river between being dotted with vessels. To the northwest, behind the Executive Mansion, is the spacious building of the State, War and Navy Departments, having for a background the picturesque Georgetown Heights, just over the District boundary, their tops rising four hundred feet above the river. Farther to the northward is Seventh Street Hill, crowned with the buildings of Howard University, and beyond it the distant tower of the Soldiers' Home. All around the view is magnificent; and years ago, before the city expected to attain anything like its present grandeur, Baron von Humboldt, as he stood upon the western verge of Capitol Hill and surveyed this gorgeous picture, exclaimed: "I have not seen a more charming panorama in all my travels."

After the British burnt the original Capitol, it was rebuilt and finished in 1827; but the unexampled growth of the country and of Congress soon demanded an extension, which was begun in 1851. It is this extension which supplied the wings and dome, designed and constructed by the late Thomas U. Walter, that has made the building so attractive. This grand Republican palace of government, stretching over

seven hundred and fifty feet along the top of the hill, has cost about $16,000,000. The old central building is constructed of Virginia freestone, painted white, the massive wings are of white marble from Massachusetts, and the lofty dome is of iron. The dazzling white marble gleams in the sunlight, and fitly closes the view along the great avenues radiating from it as a common centre. The architecture is classic, with Corinthian details, and, to add dignity to the western front, which overlooks the city, a magnificent marble terrace, eight hundred and eighty-four feet long, has been constructed at its base on the crest of the hill, which is approached by two broad flights of steps.

The Capitol is surrounded by a park of about fifty acres, including the western declivity of the hill and part of the plateau on top. Upon this plateau, on the eastern front, the populace assemble every fourth year to witness the inauguration of the President when he is sworn into office by the Chief Justice, and delivers his inaugural address from a broad platform at the head of the elaborate staircase leading up to the entrance to the great central rotunda. In full view of the President, as he stands under the grand Corinthian portico, is a colossal statue of Washington, seated in his chair of state, and facing the new President, as if in solemn warning. The rotunda is the most striking feature of the Capitol interior; it is nearly one hundred feet in diameter, and rises one hundred

and eighty feet to the ceiling of the dome, which is ornamented with fine frescoes by Brumidi. Large panelled paintings on the walls just above the floor, and *alti rilievi* over them, represent events in the early history of the country, while at a height of one hundred feet a band nine feet wide runs around the interior of the dome, upon which a series of frescoes tell the story of American history from the landing of Columbus. But, most appropriately, the elaborate decorations, while reproducing so much in Indian legend and Revolutionary story, are not used in any way to recall the Civil War. Away up in the top of the dome there is a Whispering Gallery, to which a stairway laboriously leads.

The old halls of the Senate and House in the original wings of the Capitol are now devoted, the former to the Supreme Court and the latter to a gallery of statuary, to which each State contributes two subjects, mostly Revolutionary or Colonial heroes. Beyond, on either hand, are the extensive new wings—the Senate Chamber to the north and the Representatives' Hall to the south. Each is surrounded by corridors, beyond which are committee rooms, and there are spacious galleries for the public. Each member has his chair and desk, the seats being arranged in semicircles around the rostrum. In practice, while the House is in session, the members are usually reading or writing, excepting the few who may watch what is going on, because they are specially inter-

ested in the matter under consideration; and the member who may have the floor and is speaking is actually heard by very few, his speech being generally made for the galleries and the official stenographers and newspaper reporters. Debate rarely reaches a point of interest absorbing the actual attention of the whole House, most of the speech-making seeming to be delivered for effect in the member's home district, this method being usually described as "talking for Buncombe." The other members read their newspapers, write their letters, clap their hands sharply to summon the nimble pages who run about the hall upon their errands, gossip in groups, and otherwise pass their time, move in and out the cloak- and committee-rooms, and in various ways manage not to listen to much that goes on. Nevertheless, business progresses under an iron-clad code of procedure, the Speaker being a despot who largely controls legislation. The surroundings of the Senate Chamber are grander than those of the House, there being a gorgeous "Marble Hall," in which Senators give audience to their visitors, and magnificently ornamented apartments for the President and Vice-President. The President's Room is only occupied during a few hours in the closing scenes of a session, this small but splendid apartment, which has had $50,000 expended upon its decoration, being a show place for the remainder of the year.

THE WHITE HOUSE.

The most famous building in Washington, though one of the least pretentious, is the Executive Mansion, popularly known as the "White House," being constructed, like the older part of the Capitol, of freestone, and painted white. It stands within a park at some distance back from the street, a semicircular driveway leading up to the Ionic colonnade supporting the front central portico. It is a plain building, without pretensions in anything but its august occupancy, and the ornamental grounds stretch down to the Potomac River, which flows about two hundred yards below its southern front. It is two stories high, about one hundred and seventy feet long, and eighty-six feet deep. This building, like the Capitol, was burnt in the British invasion of 1814 and afterwards restored. Unlike the nation, or the enormous public buildings that surround and dwarf it, the White House has in no sense grown, but remains as it was designed in the lifetime of Washington. It is nevertheless a comfortable mansion, though rigid in simplicity. The parlor of the house, the "East Room," is the finest apartment, occupying the whole of that side, and is kept open for visitors during most of the day. The public wander through it in droves, walk upon the carpets and recline in the soft chairs, awaiting the President's coming to his almost daily reception and handshak-

ing; for they greatly prize this joint occupancy, as it were, and close communion with their highest ruler. This is an impressive room, and in earlier times was the scene of various inauguration feasts, when Presidents kept open house for their political friends and admirers.

The "East Room" was a famous entertainment hall in President Jackson's time. On the evening of his inauguration day it was open to all comers, who were served with orange punch and lemonade. The crowds were large, and the punch was mixed in barrels, being brought in by the bucketful, the thirsty throngs rushing after the waiters, and in the turmoil upsetting the punch and ruining dresses and carpets. The punch receptacles were finally taken out into the gardens, and in this way the boisterous crowds were drawn off, and it became possible to serve cake and wine to the ladies. Various traditions are still told of this experience, and also of the monster cheese, as big as a hogshead, that was served to the multitude at Jackson's farewell reception. It was cut up with long saw-blades, and each guest was given about a pound of cheese, this feast being the talk of the time. Jackson's successor was Martin Van Buren, who came from New York, the land of big cheeses. Being bound to emulate his predecessor, an even larger cheese was sent him, and cut up in the "East Room." The crowds trampled the greasy crumbs into the carpets and hangings, and all the furniture

and fittings were ruined. Now no guest comes unbidden to dine at the White House; but the change in the fashion aided in defeating Van Buren, who was a candidate for a second election in 1840. He stopped keeping open house in order to save the furniture and get some peace, and during several months preceding the election many persons arrived at the White House for breakfast or dinner and threatened to vote against Van Buren unless they were entertained. This, with the fact noised abroad that he had become such an aristocrat that his table service included gold spoons, then an unheard of extravagance, proved too much for him. Van Buren was beaten for re-election by "Old Tippecanoe"—General William Henry Harrison.

A corridor leads westward from the "East Room," through the centre of the White House, to the conservatories, which are prolonged nearly two hundred feet farther westward. A series of fine apartments, called the Green, Blue and Red Rooms, from the predominant colors in their decorations, are south of this corridor, with their windows opening upon the gardens. These apartments open into each other, and finally into the State Dining Hall on the western side of the building, which is adjoined by a conservatory. North of the corridor the first floor contains the family rooms, and on the second floor are the sleeping-rooms and also the public offices. The Cabinet Room, about in the centre of the build-

THE CAPITOL, WASHINGTON

ing, is a comparatively small apartment, where the Cabinet meetings assemble around a long table. On one side of it, at the head of a broad staircase, are the offices of the secretaries, over the East Room; and on the other side, the President's private apartment, which is called the Library. Here the President sits, with the southern sun streaming through the windows, to give audience to his visitors, who are passed in by the secretaries. One of the desks, which is usually the President's personal work-table, has a history. The British ship "Resolute," years ago, after many hardships in the fruitless search for Sir John Franklin, had to be abandoned in the Arctic seas. Portions of her oaken timbers were taken back to England, and from these, by the Queen's command, the desk was made and presented to President Grant, and it has since been part of the furniture in the Library. An adjacent chamber, wherein the Prince of Wales slept on his only visit to America, and the chamber adjoining, are the two sleeping-rooms which have been usually occupied by the greatest Presidents. The accommodations are so restricted, however, that a movement is afoot for constructing another presidential residence, on higher land in the suburbs, so that the White House may be exclusively used for the executive offices.

ELABORATE PUBLIC BUILDINGS.

The great public buildings used for Government purposes are among the chief adornments of Wash-

ington. To the eastward of the White House is the Treasury Building, extending over five hundred feet along Fifteenth Street, enriched by a magnificent Ionic colonnade, three hundred and fifty feet long, modelled from that of the Athenian Temple of Minerva. Each end has an elaborate Ionic portico, while the western front, facing the White House, has a grand central entrance. This was the first great building constructed for a Government department, and is the headquarters of the Secretary of the Treasury. Upon the western side of the White House is the most splendid of all the department buildings, accommodating three of them, the State, War and Navy Departments. It is Roman Doric, built of granite, four stories high, with Mansard and pavilion roofs and porticoes, covering a surface of five hundred and sixty-seven by three hundred and forty-two feet. The Salon of the Ambassadors, or the Diplomatic Reception Room, is its finest apartment, and is the audience chamber of the Secretary of State, who occupies the adjoining Secretary's Hall, also a splendid room. This great building is constructed around two large interior courts, the Army occupying the northern and western wings, and the Navy the eastern side, where among the great attractions are the models of the famous warships of the American Navy. To the northward of the White House park and furnishing a fine front view is Lafayette Square, containing a bronze equestrian statue of General Jack-

son by Clark Mills; beyond, on the western side, is the attractive Renaissance building of the Corcoran Art Gallery, amply endowed by the late banker, William W. Corcoran, and containing his valuable art collections, which were given to the public. The foundation of his fortune was laid over a half-century ago, when he had the pluck to take a Government loan which seemed slow of sale. His modest banking house still exists as the Riggs Bank, facing the Treasury.

The most admired of the newer public buildings in Washington is the Congressional Library, on the plateau southeast of the Capitol, an enormous structure in Italian Renaissance, a quadrangle four hundred and seventy feet long and three hundred and forty feet wide, enclosing four courts and a central rotunda. It was finished in 1897, and cost about $6,-200,000. Its elevated gilded dome and lantern are conspicuous objects in the view. This great Library, the largest in the country, is appropriately ornamented, and its book-stacks have accommodations for about five millions of volumes, the present number approximating one million, with nearly three hundred thousand pamphlets. The Pension Building is another huge structure, northwest of Capitol Hill, built around a covered quadrangle, which is used quadrennially for the "Inauguration Ball," a prominent Washington official-social function, which was adopted to relieve the White House from the former

feasting on the inauguration night. This house, accommodating the army of pension clerks, has running around the walls, over the lower windows, a broad band, exhibiting in relief a marching column of troops, with representations of every branch of the service. Seventh Street, which crosses Pennsylvania Avenue about midway between the Capitol and the Treasury, has to the northward the imposing Corinthian Post-office Building, formerly the headquarters of the postal service. Behind this is the Department of the Interior, popularly known as the Patent Office, as a large part of it is occupied by patent models. This is a grand Doric structure, occupying two blocks and embracing about three acres of buildings, the main entrance being a magnificent portico, seen from Pennsylvania Avenue. The new General Post-office Department Building is on Pennsylvania Avenue, covering a surface of three hundred by two hundred feet, and having a tower rising three hundred feet. It has just been completed. The Government Printing Office, where the public printing is done, and the Treasury Bureau of Engraving and Printing, where all the Government money issues and revenue stamps are made, are large and important buildings, though not specifically attractive in architecture.

THE SMITHSONIAN INSTITUTION.

Upon the Mall stands the Smithsonian Institution, of world-wide renown, one of the most interesting

public structures in Washington, its turrets and towers rising above the trees. The origin of this famous scientific establishment was the bequest of an Englishman, James Smithson, a natural son of Hugh Smithson, Duke of Northumberland, born in 1765. He was known as Louis Macie at Oxford, graduating under that name; early developed scientific tastes; was a Fellow of the Royal Society, the friend and associate of many of the most learned men of his time, and lived usually in Paris, where in the latter part of the last century he took the family name of his father. He died in Italy in 1829. In Washington's Farewell Address, issued in 1796, there occurs the phrase, "An institution for the increase and diffusion of knowledge," and it was well known that the Father of his Country cherished a project for a national institution of learning in the new Federal City. This was evidently communicated to Smithson by one of his intimates in Paris, Joel Barlow, a noted American, who was familiar with Washington's plan, and in this way originated the residuary bequest, which was contained in the following clause of Smithson's will: "I bequeath the whole of my property to the United States of America, to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." Upon the death of Smithson's nephew, without heirs, in 1835, this bequest became operative, and the United States

Legation in London was notified that the estate, then amounting in value to about £100,000, was held in possession of the Accountant-General of the Court of Chancery. This was something novel in America, and when the facts became public opposition arose in Congress to accepting the gift, eminent men, headed by John C. Calhoun, arguing that it was beneath the dignity of the United States to receive presents. Others, however, led by John Quincy Adams, ardently advocated acceptance. The latter carried the day; Richard Rush was sent to London, as agent, to prosecute the claim in the Court of Chancery, in the name of the President of the United States; and the legacy was obtained and delivered at the Mint in Philadelphia, September 1, 1838, in the sum of 104,960 British sovereigns, and was immediately recoined into United States money, producing $508,318.46, the first installment of the legacy. There were subsequent additional installments, and the total sum in 1867 reached $650,000. This original sum was deposited in the Federal Treasury in perpetuity, at six per cent. interest, and the income has been devoted to the erection of the buildings, and, with other subsequently added sums, to the support of the vast establishment which has grown from the original gift.

The Smithsonian Institution was formally created by Act of Congress, August 10, 1846, the corporation being composed of the President, Vice-President, members of the Cabinet and Chief Justice, who are

constituted the "establishment," made responsible for the duty of "the increase and diffusion of knowledge among men." The Institution is administered by a Board of Regents, including in addition three Senators, three members of the House, and six citizens appointed by Congress; the presiding officer, called the "Chancellor," being usually the Chief Justice, and the secretary of the board is the Executive Officer. The late eminent Professor Joseph Henry was elected secretary in 1846, and he designed the plan and scope of the Institution, continuing as its executive head until his death in 1878. His statue stands in the grounds near the entrance. Two other secretaries followed him, Spencer F. Baird (who was twenty-seven years assistant secretary), and upon his death Samuel P. Langley, in 1888. The ornate building of red Seneca brownstone, a fine castellated structure in the Renaissance style, was designed in 1847 and finished in 1855. Its grand front stretches about four hundred and fifty feet, and its nine towers and turrets, rising from seventy-five to one hundred and fifty feet, stand up prettily behind the groves of trees. This original building contains a museum of natural history and anthropology. In connection with it there is another elaborate structure over three hundred feet square—the National Museum—containing numerous courts, surrounding a central rotunda, beneath which a fountain plashes. This is under the same management, and directly supported

by the Government, the design being to perfect a collection much like the British Museum, but paying more attention to American antiquities and products. This adjunct museum began with the gifts by foreign Governments to the Philadelphia Centennial Exposition in 1876, most of them being still preserved there. The Smithsonian Trust Fund now approximates $1,000,000, and there are various other gifts and bequests held in the Treasury for various scientific purposes similarly administered.

Briefly stated, the plan of Professor Henry was to "increase knowledge" by original investigations and study, either in science or literature, and to "diffuse knowledge" not only through the United States, but everywhere, and especially by promoting an interchange of thought among the learned in all nations, with no restriction in favor of any one branch of knowledge. A leading feature of his plan was "to assist men of science in making original researches, to publish them in a series of volumes, and to give a copy of them to every first-class library on the face of the earth." There is said to be probably not a scientific observer of any standing in the United States to whom the Institution has not at some time extended a helping hand, and this aid also goes liberally across the Atlantic. As income grew, the scope has been enlarged. In the various museums there is a particularly good collection of American ethnology, and a most elaborate display of American fossils,

minerals, animals, birds and antiquities. There are also shown by the Fish Commission specimens of the fishing implements and fishery methods of all nations, an exhibition which is unexcelled in these special departments. Many specifically interesting things are in the National Museum. The personal effects of Washington, Jackson and General Grant are there. Benjamin Franklin's old printing-press is preserved in a somewhat dilapidated condition, and there is also the first railway engine sent from England to the United States, the original "John Bull," built by Stephenson & Son at Newcastle-on-Tyne in June, 1831, and sent out as "Engine No. 1" for the Camden and Amboy Railroad crossing New Jersey, now a part of the Pennsylvania Railroad. It weighs ten tons, and has four driving-wheels of fifty-four inches diameter. This relic, after being used on the railroad for forty years, until improved machinery superseded it, has been given the Government as a national heirloom. Among the anthropological collections is a chronologically arranged series illustrating American history from the period of the discovery to the present day. This includes George Catlin's famous collection of six hundred paintings, illustrating the manners and customs of the North American Indians. One of the most important features of the work of this most interesting establishment is its active participation in all the great International Expositions by the loan to them of

valuable exhibits under Government direction and control.

THE SOLDIERS' HOME AND WASHINGTON MONUMENT.

The city of Washington, with progressing years, is becoming more and more the popular residential city of the country. It is one of the most beautiful and attractive, the admirable plan, with the wide asphalted streets, lined with trees, opening up vista views of grand public buildings, statues, monuments or leafy parks, making it specially popular. The northern and northwestern sections, on the higher grounds, have consequently spread far beyond the Executive Mansion, being filled with rows of elaborate and costly residences, the homes of leading public men. The streets are kept scrupulously clean, while at the intersections are "circles," triangles and little squares, which are availed of for pretty parks, and usually contain statues of distinguished Americans. Among the noted residence streets are Vermont, Massachusetts and Connecticut Avenues and K Street and Sixteenth Street, all in the northwestern district. Among the many statues adorning the small parks and "circles" are those of Washington, Farragut, Scott, Thomas, McPherson, Dupont, Logan, Franklin, Hancock, Grant, Rawlins and Martin Luther, the latter a replica of the figure in the Reformation Monument at Worms.

To the northward the suburbs rise to Columbia

Heights, with an elevated plateau beyond, where there is a Government park covering nearly a square mile of rolling surface, and surrounding one of the noted rural retreats on the borders of the Capital, the "Soldiers' Home." This is an asylum and hospital for disabled and superannuated soldiers of the American regular army, containing usually about six hundred of them, and founded by General Winfield Scott, whose statue adorns the grounds. Its cottages have been favorite retiring-places of the Presidents in the warm weather. Amid lovely surroundings the veterans are comfortably housed, and in the adjacent cemetery thousands of them have been buried. Scott's statue stands upon the southern brow of the plateau, where a ridge is thrust out in a commanding situation; and from here the old commander of the army forty and fifty years ago gazes intently over the lower ground to the city three miles away, with the lofty Capitol dome and Washington Monument rising to his level, while beyond them the broad and placid Potomac winds between its wooded shores. This is the most elevated spot near Washington, overlooking a wide landscape. In the cemetery at the Soldiers' Home sleeps General Logan, among the thousands of other veterans. To the westward the beautiful gorge of Rock Creek is cut down, and beyond is Georgetown, with its noted University, founded by the Jesuits in 1789, and having about seven hundred students. In the Oak Hill Cemetery,

at Georgetown, is the grave of John Howard Payne, the author of "Home, Sweet Home," who died in 1852. Far away over the Potomac, in the Arlington National Cemetery, are the graves of Generals Sherman and Sheridan.

Down near the Potomac, on the Mall, to the westward of the Smithsonian turrets, is the extensive brick and brownstone building representing the dominant industry of the United States, which gives the politicians so much anxiety in catering for votes—the Agricultural Department. Here are spacious gardens and greenhouses, an arboretum and herbarium, the adjacent buildings also containing an agricultural museum. As over three-fifths of the men in the United States are farmers and farm-workers, and many others are in the adjunct industries, it has become a popular saying in Washington that if you wish to scare Congress you need only shake a cow's tail at it. This department has grown into an enormous distributing office for seeds and cuttings, crop reports and farming information. Among its curiosities is the "Sequoia Tree Tower," formed of a section of a Sequoia or Big Tree of California, which was three hundred feet high and twenty-six feet in diameter at the base.

Behind the Agricultural Department, and rising almost at the river bank, and in front of the Executive Mansion, is the noted Washington Monument, its pointed apex elevated five hundred and fifty-five

feet. This is a square and gradually tapering shaft, constructed of white Maryland marble, the walls fifteen feet thick at the base and eighteen inches at the top, the pyramidal apex being fifty-five feet high and capped with a piece of aluminum. Its construction was begun in 1848, abandoned in 1855, resumed in 1877 and finished in 1884, at a total cost of $1,300,000. The lower walls contain stones contributed by public corporations and organizations, many being sent by States and foreign nations, and bearing suitable inscriptions in memory of Washington. A fatiguing stairway of nine hundred steps leads to the top, and there is also a slow-moving elevator. From the little square windows, just below the apex, there is a grand view over the surrounding country. Afar off to the northwest is seen the long hazy wall of the Blue Ridge or Kittatinny Mountain range, its prominent peak, the Sugar Loaf, being fifty miles distant. To the eastward is the Capitol and its surmounting dome, over a mile away, while the city spreads all around the view below, like a toy town, its streets crossing as on a chess-board, and cut into gores and triangles by the broad, diagonal avenues lined with trees, the houses being interspersed with many foliage-covered spaces. Coming from the northwest the Potomac passes nearly at the foot of the monument, with Arlington Heights over on the distant Virginia shore, and the broad river channel flowing away to the southwest until lost among the

winding forest-clad shores below Alexandria. From this elevated perch can be got an excellent idea of the peculiarities of the town, its vast plan and long intervals of space, so that there is quite plainly shown why the practical Yankee race calls it the "City of Magnificent Distances." Possibly one of the best descriptions of Washington and its characteristics is that of the poet in the *Washington Post:*

A city well named of magnificent distances;
Of boulevards, palaces, fountains and trees;
Of sunshine and moonlight whose subtle insistence is—
"Bask in our radiance! Be lulled by our breeze!"
A city like Athens set down in Arcadia;
White temples and porticoes gleaming 'mid groves;
Where nymphs glide and smile as though quite unafraid o' you,
The home of the Muses, the Graces, the Loves;
The centre of Politics, Letters and Sciences;
Elysium of Arts, yet the Lobbyist's Dream;
Where gather the clans whose only reliance is
Gold and the dross that sweeps down with its stream;
An isle of the lotus, where every-day business
Sails on its course all unvexed by simoons;
No bustle or roar, no mad-whirling dizziness
O'er velvety streets like Venetian lagoons;
A town where from nothing whatever they bar women,
From riding a bicycle—tending a bar;
Ex-cooks queen society—ladies are charwomen—
For such the plain facts as too often they are.
A city where applicants, moody, disconsolate,
Swoop eager for office and senseless to shame;
The "heeler" quite certain of getting his consulate,
Although, to be sure, he can't sign his name;
A town where all types of humanity congregate;
The millionaire lolling on cushions of ease;

The tramp loping by at a wolfish and hungry gait;
And mankind in general a' go as you please.
A city in short of most strange inconsistencies;
Condensing the history of man since the fall;
A city, however, whose piece de resistance is
This—'tis the best and the fairest of all.

THE POTOMAC AND THE ALLEGHENIES.

The Potomac is one of the chief among the many rivers draining the Allegheny Mountains. It originates in two branches, rising in West Virginia and uniting northwest of Cumberland; is nearly four hundred miles long; has remarkably picturesque scenery in the magnificent gorges and reaches of its upper waters; breaks through range after range of the Alleghenies, and after reaching the lowlands becomes a tidal estuary for a hundred miles of its final course, broadening to six and eight and ultimately sixteen miles wide at its mouth in the Chesapeake. Washington is near the head of tidewater, one hundred and twenty-five miles from the bay; and for almost its entire course the Potomac is an interstate boundary, between Maryland and West Virginia and Virginia. Its name is Indian, referring to its use in their primitive navigation, the original word "Petomok" meaning "they are coming by water"—"they draw near in canoes." The Alleghenies, where this noted river originates, are a remarkable geological formation. The Atlantic Coast of the United States has a general trend from the northeast to the south-

west, with bordering sand beaches, and back of them a broad band of pines. Then, towards the northwest, the land gradually rises, being formed in successive ridges, with intervening valleys, until it reaches the Alleghenies. The great ranges of this mountain chain, which is geologically known as the Appalachian System, run almost parallel to the coast for over a thousand miles, from the White Mountains of New Hampshire down to Alabama. They are noted mountains, not very high, but of remarkable construction, and are said to be much older in geological formation than the Alps or the Andes. They are composed of series of parallel ridges, one beyond the other, and all following the same general course, like the successive waves of the ocean. For long distances these ridges run in perfectly straight lines, and then, as one may curve around into a new direction, all the others curve with it. The intervening valleys are as remarkable in their parallelism as the ridges enclosing them. From the seaboard to the mountains the ranges of hills are of the same general character, but with less elevation, gentler slopes, and in most cases narrower and much more fertile valleys.

The South Mountain, an irregular and in some parts broken-down ridge, is the outpost of the Alleghenies, while the great Blue Ridge is their eastern buttress. The latter is about twenty miles northwest of the South Mountain, and is the famous Kit-

tatinny range, named by the Indians, and in their figurative language meaning "the endless chain of hills." It stretches from the Catskills in New York southwest to Alabama, a distance of eight hundred miles, a veritable backbone for the Atlantic seaboard, its rounded ridgy peaks rising sometimes twenty-five hundred feet north of the Carolinas, and much higher in those States. It stands up like a great blue wall against the northwestern horizon, deeply notched where the rivers flow out, and is the eastern border for the mountain chain of numerous parallel ridges of varying heights and characteristics that stretch in rows behind it, covering a width of a hundred miles or more. Within this chain is the vast store of minerals that has done so much to create American wealth—the coal and iron, the ores and metals, that are in exhaustless supply, and upon the surface grew the forests of timber that were used in building the seaboard cities, but are now nearly all cut off. The great Atlantic Coast rivers rise among these mountain ridges, break through the Kittatinny and flow down to the ocean, while the streams on their western slopes drain into the Mississippi Valley. The Hudson breaks through the Kittatinny outcrop at the West Point Highlands, the Delaware forces a passage at the Water Gap, the Lehigh at the Lehigh Gap, below Mauch Chunk; the Schuylkill at Port Clinton, the Susquehanna at Dauphin, above Harrisburg, and the Potomac at Harper's Ferry. All these

rivers either rise among or force their winding passages through the various ranges behind the great Blue Ridge, and also through the South Mountain and the successive parallel ranges of lower hills that are met on their way to the coast, so that all in their courses display most picturesque valleys.

HARPER'S FERRY AND JOHN BROWN.

The Potomac, having flowed more than two hundred miles through beautiful gorges and the finest scenery of these mountains, finally breaks out at Harper's Ferry, receiving here its chief tributary, the Shenandoah, coming up from Virginia, the Potomac River passage of the Blue Ridge being described by Thomas Jefferson as "one of the most stupendous scenes in nature." The Shenandoah—its name meaning "the stream passing among the spruce-pines"—flows through the fertile and famous "Valley of Virginia," noted for its many battles and active movements of troops during the Civil War, when the rival forces, as fortunes changed, chased each other up and down the Valley; and Harper's Ferry, at the confluence of the rivers, and the towering Maryland Heights on the northern side and the Loudon Heights on the Virginia side, the great buttresses of the river passage, being generally held as a northern border fortress. These huge mountain walls rise fifteen hundred feet above the town, which has a population of about two thousand.

Harper's Ferry was also the scene of "John Brown's raid," which was practically the opening act of the Civil War, although actual hostilities did not begin until more than a year afterwards. "Old John Brown of Osawatomie" was a tanner, an unsettled and adventurous spirit and foe of slavery, born in Connecticut in 1800, but who, at the same time, was one of the most upright and zealous men that ever lived. In his wanderings he migrated to Kansas in 1855, where he lived at Osawatomie, and fought against the pro-slavery party. His house was burnt and his son killed in the Kansas border wars, and he made bloody reprisals. Smarting under his wrongs, he became the master-spirit of a convention which met at Chatham, Canada, in May, 1859, and organized an invasion of Virginia to liberate the slaves. Having formed his plans, he rented a farmhouse in July about six miles from Harper's Ferry, and gathered his forces together. On the night of October 16th, with twenty-two associates, six being negroes, he crossed the bridge into Harper's Ferry, and captured the arsenal and armory of the Virginia militia, intending to liberate the slaves and occupy the heights of the Blue Ridge as a base of operations against their owners. A detachment of United States marines were next day sent to the aid of the militia, and, after two days' desultory hostilities, some of his party were killed, and Brown and the survivors were captured and given up to the Virginia authorities for

trial. His final stand was made in a small engine-house, known as "John Brown's Fort," which was exhibited at the Chicago Exposition in 1893. Brown and six of his associates were hanged at the county-seat, Charlestown, seven miles southwest of Harper's Ferry, on December 2d, Brown facing death with the greatest serenity. His raid failed, but it was potential in disclosing the bitter feeling between the North and the South, and it furnished the theme for the most popular and inspiring song of the Civil War:

> "John Brown's body lies mouldering in the grave,
> But his soul goes marching on."

THE GREAT FALLS AND ALEXANDRIA.

The Potomac continues its picturesque course below Harper's Ferry, and passes the Point of Rocks, a promontory of the Catoctin Mountain, a prolongation of the Blue Ridge. There were battles fought all about, the most noted being at South Mountain and Antietam, to the northward, in September, 1862; while it was at Frederick, fifteen miles away, during this campaign, that Barbara Frietchie was said to have waved the flag as Stonewall Jackson marched through the town, immortalized in Whittier's poem. Here is buried Francis Scott Key, author of the "Star-Spangled Banner," who died in 1843, and a handsome monument was erected to his memory in 1898. The Potomac reaches its Great Falls about fifteen miles above Washington, where it descends

eighty feet in about two miles, including a fine cataract thirty-five feet high. Below this is the "Cabin John Bridge," with one of the largest stone arches in the world, of two hundred and twenty feet span, built for the Washington Aqueduct, carrying the city water supply from the Great Falls. On Wesley Heights, to the northward, the new American University of the Methodist Church is being constructed.

Below Washington, the river passes the ancient city of Alexandria, a quaint old Virginian town, which was formerly of considerable commercial importance, but is now quiet and restful, and cherishing chiefly the memory of George Washington, who lived at Mount Vernon, a few miles below, and was its almost daily visitor to transact his business and go to church and entertainments. The tradition is that Madison, who was chairman of the Committee of Congress, selected Alexandria for the "Federal City," intending to erect the Capitol on Shooters' Hill, a mile out of town, as grand an elevation as the hill in Washington; but he was overruled by the President because the latter hesitated to thus favor his native State. Had Madison had his way, the town probably would not now be so sleepy. The modest little steeple of Christ Church, where Washington was a vestryman, rises back of the town, and his pew, No. 5, is still shown, for which, when the church was built and consecrated in 1773, the records show that he paid thirty-six pounds, ten shillings. To construct

this church and another at the Falls, the vestry of Fairfax parish, in 1766, levied an assessment of 31,185 pounds of tobacco, and the rector's salary was also paid in tobacco. After the Revolution, to help support the church, Washington and seven others signed an agreement in the vestry-book to each pay five pounds annual rental for the pews they owned. Robert E. Lee was baptized and confirmed and attended Sunday-school in this old church, and tablets in memory of Washington and Lee were inserted in the church wall in 1870. At the Carey House, near the river, Washington, in 1755, received from General Braddock, who had come up there from Hampton Roads, his first commission as an aide to that commander, with the rank of Major, just before starting on the ill-starred expedition into Western Pennsylvania. Alexandria has probably fifteen thousand people, and on the outskirts is another mournful relic of the Civil War, a Soldiers' Cemetery, with four thousand graves. Below Alexandria, the Hunting Creek flows into the Potomac, this stream having given Washington's home its original name of the "Hunting Creek Estate."

WASHINGTON'S HOME AND TOMB.

Mount Vernon, the home and burial-place of George Washington, is seventeen miles below the city of Washington, the mansion-house, being in full view, standing among the trees on the top of a bluff, rising

about two hundred feet above the river. As the steamboat approaches, its bell is tolled, this being the universal custom on nearing or passing Washington's tomb. It originated in the reverence of a British officer, Commodore Gordon, who, during the invasion of the Capital in August, 1814, sailed past Mount Vernon, and as a mark of respect for the dead had the bell of his ship, the "Sea Horse," tolled. The "Hunting Creek Estate" was originally a domain of about eight thousand acres; and Augustine Washington, dying in 1743, bequeathed it to Lawrence Washington, who, having served in the Spanish wars under Admiral Vernon, named it Mount Vernon in his honor. George Washington was born in 1732, in Westmoreland County, farther down the Potomac, and when a boy lived near Fredericksburg, on the Rappahannock River. In 1752 he inherited Mount Vernon from Lawrence, and after his death the estate passed to his nephew, Bushrod Washington, subsequently descending to other members of the family. Congress repeatedly endeavored to have Washington's remains removed to the crypt under the rotunda of the Capitol originally constructed for their reception, but the family always refused, knowing it was his desire to rest at Mount Vernon. The grounds and buildings being in danger of falling into dilapidation, and the estate passing under control of strangers, a patriotic movement began throughout the country for the purchase of the portion contain-

ing the tomb and mansion. The Virginia Legislature, in 1856, passed an act authorizing the sale, and under the auspices of a number of energetic ladies who formed the "Mount Vernon Association," assisted by the oratory of Edward Everett, who traversed the country making a special plea for help, a tract of two hundred acres was bought for $200,000, being enlarged by subsequent gifts to two hundred and thirty-five acres. These ladies and their successors have since taken charge, restoring and beautifying the estate, which is faithfully preserved as a patriotic heritage and place of pilgrimage for visitors from all parts of the world.

The steamboat lands at Washington's wharf at the foot of the bluff, where he formerly loaded his barges with flour ground at his own mill, shipping most of it from Alexandria to the West Indies. The road from the wharf leads up a ravine cut diagonally in the face of the bluff, directly to Washington's tomb, and alongside the ravine are several weeping willows that were brought from Napoleon's grave at St. Helena. Washington's will directed that his tomb "shall be built of brick," and it is a plain square brick structure, with a wide arched gateway in front and double iron gates. Above is the inscription on a marble slab, "Within this enclosure rests the remains of General George Washington." The vault is about twelve feet square, the interior being plainly seen through the gates. It has upon the floor two large stone coffins, that on the

right hand containing Washington, and that on the left his widow Martha, who survived him over a year. In a closed vault at the rear are the remains of numerous relatives, and in front of the tomb monuments are erected to several of them. No monument marks the hero, but carved upon the coffin is the American coat-of-arms, with the single word "Washington."

The road, farther ascending the bluff, passes the original tomb, with the old tombstone antedating Washington and bearing the words "Washington Family." This was the tomb, then containing the remains, which Lafayette visited in 1824, escorted by a military guard from Alexandria to Mount Vernon, paying homage to the dead amid salvos of cannon reverberating across the broad Potomac. It is a round-topped and slightly elevated oven-shaped vault. The road at the top of the bluff reaches the mansion, standing in a commanding position, with a fine view over the river to the Maryland shore. It is a long wooden house, with an ample porch facing the river. It is built with simplicity, two stories high, and contains eighteen rooms, there being a small surmounting cupola for a lookout. The central portion is the original house built by Lawrence Washington, who called it his "villa," and afterwards George Washington extended it by a large square wing at each end, and when these were added he gave it the more dignified title of the "Mansion."

The house is ninety-six feet long and thirty feet wide, the porch, extending along the whole front, fifteen feet wide, its top being even with the roof, thus covering the windows of both stories. Eight large square wooden columns support the roof of the porch. Behind the house, on either side, curved colonnades lead to the kitchens, with other outbuildings beyond. There are various farm buildings, and a brick barn and stable, the bricks of which it is built having been brought out from England about the time Washington was born, being readily carried in those days as ballast in the vessels coming out for Virginia tobacco. The front of the mansion faces east, and it has within a central hall with apartments on either hand. At the back, beyond the outbuildings and the barn, stretches the carriage road, which in Washington's time was the main entrance, off to the porter's lodge, on the high road, at the boundary of the present estate, about three-quarters of a mile away. Everything is quiet, and in the thorough repose befitting such a great man's tomb; and this is the modest mansion on the banks of the Potomac that was the home of one of the noblest Americans.

THE WASHINGTON RELICS.

As may be supposed, this interesting building is filled with relics. The most valuable of all of them hangs on the wall of the central hall, in a small glass case shaped like a lantern—the Key of the Bastille—

which was sent to Washington, as a gift from Lafayette, shortly after the destruction of the noted prison in 1789. This is the key of the main entrance, the Porte St. Antoine, an old iron key with a large handle of peculiar form. This gift was always highly prized at Mount Vernon, and in sending it Lafayette wrote: "It is a tribute which I owe as a son to my adopted father; as an aide-de-camp to my general; as a missionary of liberty to its patriarch." The key was confided to Thomas Paine for transmission, and he sent it together with a model and drawing of the Bastille. In sending it to Washington Paine said: "That the principles of America opened the Bastille is not to be doubted, and therefore the key comes to the right place." The model, which was cut from the granite stones of the demolished prison, and the drawing, giving a plan of the interior and its approaches, are also carefully preserved in the house.

The Washington relics are profuse—portraits, busts, old furniture, swords, pistols and other weapons, camp equipage, uniforms, clothing, books, autographs and musical instruments, including the old harpsichord which President Washington bought for two hundred pounds in London, as a bridal present for his wife's daughter, Eleanor Parke Custis, whom he adopted. There is also an old armchair which the Pilgrims brought over in the "Mayflower" in 1620. Each apartment in the house is named for a State, and cared for by one of the Lady-Regents of the

Association. In the banquet-hall, which is one of the wings Washington added, is an elaborately-carved Carrara marble mantel, which was sent him at the time of building by an English admirer, Samuel Vaughan. It was shipped from Italy, and the tale is told that on the voyage it fell into the hands of pirates, who, hearing it was to go to the great American Washington, sent it along without ransom and uninjured. Rembrandt Peale's equestrian portrait of Washington with his generals covers almost the entire end of this hall. Here also is hung the original proof-sheet of Washington's Farewell Address. Up stairs is the room where Washington died; the bed on which he expired and every article of furniture are preserved, including his secretary and writing-case, toilet-boxes and dressing-stand. Just above this chamber, under the peaked roof, is the room in which Mrs. Washington died. Not wishing to occupy the lower room, after his death, she selected this one, because its dormer window gave a view of his tomb. The ladies who have taken charge of the place deserve great credit for their complete restoration; they hold the annual meeting of the Association in the mansion every May.

As the visitor walks through the old house and about the grounds, solemn and impressive thoughts arise that are appropriate to this great American shrine. From the little wooden cupola there is seen the same view over the broad Potomac upon which

Washington so often gazed. The noble river, two miles wide, seems almost to surround the estate with its majestic curve, flowing between the densely-wooded shores. Above Mount Vernon is a projecting bluff, which Fort Washington surmounts on the opposite shore—a stone work which he planned—hardly seeming four miles off, it is so closely visible across the water. In front are the Maryland hills, and the river then flows to the southward, its broad and winding reaches being seen afar off, as the southern shores slope upward into the forest-covered hills of the sacred soil of the proud State of Virginia. And then the constantly broadening estuary of the grand Potomac stretches for more than a hundred miles, far beyond the distant horizon, until it becomes a wide inland sea and unites its waters at Point Lookout with those of Chesapeake Bay.

MARY, THE MOTHER OF WASHINGTON.

To the southward of the Potomac a short distance, and flowing almost parallel, is another noted river of Virginia, the Rappahannock, rising in the foothills of the Blue Ridge, and broadening into a wide estuary in its lower course. Its chief tributary is the stream which the colonists named after the "good Queen Anne," the Rapid Ann, since condensed into the Rapidan. The Indians recognized the tidal estuary of the Rappahannock, for the name means "the current has returned and flowed again," re-

ferring to the tidal ebb and flow. Upon this stream, southward from Washington, is the quaint old city of Fredericksburg, which has about five thousand inhabitants, and five times as many graves in the great National Cemetery on Marye's Heights and in the Confederate Cemetery, mournful relics of the sanguinary battles fought there in 1862–63. The town dates from 1727, when it was founded at the head of tidewater on the Rappahannock, where a considerable fall furnishes good water-power, about one hundred and ten miles from the Chesapeake. But its chief early memory is of Mary Ball, the mother of Washington, here having been his boyhood home. A monument has been erected to her, which it took the country more than a century to complete. She was born in 1706 on the lower Rappahannock, at Epping Forest, and Sparks and Irving speak of her as "the belle of the Northern Neck" and "the rose of Epping Forest." In early life she visited England, and the story is told that one day while at her brother's house in Berkshire a gentleman's coach was overturned nearby and its occupant seriously injured. He was brought into the house and carefully nursed by Mary Ball until he fully recovered. This gentleman was Colonel Augustine Washington, of Virginia, a widower with three sons, and it is recorded in the family Bible that "Augustine Washington and Mary Ball were married the 6th of March, 1730–31." He brought her to his home in Westmoreland County,

where George was born the next year. His house there was accidentally burnt and they removed to Fredericksburg, where Augustine died in 1740; but she lived to a ripe old age, dying there in 1789. When her death was announced a national movement began to erect a monument, but it was permitted to lapse until the Washington Centenary in 1832, when it was revived, and in May, 1833, President Jackson laid the corner-stone with impressive ceremonies in the presence of a large assemblage of distinguished people. The monument was started and partially completed, only again to lapse into desuetude. In 1890 the project was revived, funds were collected by an association of ladies, and in May, 1894, a handsome white marble obelisk, fifty feet high, was created and dedicated. It bears the simple inscription, "Mary, the Mother of Washington."

WILLIAMSBURG AND YORKTOWN.

Again we cross over southward from the Rappahannock to another broad tidal estuary, an arm of Chesapeake Bay, the York River. This is formed by two comparatively small rivers, the Mattapony and the Pamunkey, the latter being the Indian name of York River. It is quite evident that the Indians who originally frequented and named these streams did not have as comfortable lives in that region as they could have wished, for the Mattapony means "no bread at all to be had," and the Pamunkey means

"where we were all sweating." To the southward of York River, and between it and James River, is the famous "Peninsula," the locality of the first settlements in Virginia, the theatre of the closing scene of the War of the Revolution, and the route taken by General McClellan in his Peninsular campaign of 1862 against Richmond. Williamsburg, which stands on an elevated plateau about midway of the Peninsula, three or four miles from each river, was the ancient capital of Virginia, and it has as relics the old church and magazine of the seventeenth century, and the venerable College of William and Mary, chartered in 1693, though its present buildings are mainly modern. This city was named for King William III., and was fixed as the capital in 1699, the government removing from Jamestown the next year. In 1780 the capital was again removed to Richmond. This old city, which was besieged and captured by McClellan in his march up the Peninsula in May, 1862, now has about eighteen hundred inhabitants.

Down on the bank of York River, not far from Chesapeake Bay, with a few remains of the British entrenchments still visible, is Yorktown, the scene of Cornwallis's surrender, the last conflict of the American Revolution. Sir Henry Clinton, the British commander-in-chief in 1781, ordered Lord Cornwallis to occupy a strong defensible position in Virginia, and he established himself at Yorktown on

August 1st, with his army of eight thousand men, supported by several warships in York River, and strongly fortified not only Yorktown, but also Gloucester Point, across the river. In September the American and French forces effected a junction at Williamsburg, marching to the investment of Yorktown on the 28th. Washington commanded the besieging forces, numbering about sixteen thousand men, of whom seven thousand were Frenchmen. Upon their approach the British abandoned the outworks, and the investment of the town was completed on the 30th. The first parallel of the siege was established October 9th, and heavy batteries opened with great effect, dismounting numerous British guns, and destroying on the night of the 10th a frigate and three large transports. The second parallel was opened on the 11th, and on the 14th, by a brilliant movement, two British redoubts were captured. The French fleet, under Count De Grasse, in Chesapeake Bay, prevented escape by sea, and Cornwallis's position became very critical. On the 16th he made a sortie, which failed, and on the 17th he proposed capitulation. The terms being arranged, he surrendered October 19th, this deciding the struggle for American independence. When the British troops marched out of the place, and passed between the French and American armies, it is recorded that their bands dolefully played "The World Turned Upside Down." Considering the momentous results follow-

ing the capitulation, this may be regarded as prophetic. Yorktown was again besieged in 1862 by McClellan, and after several weeks was taken in May, the army then starting on its march up the Peninsula.

THE NATURAL BRIDGE.

The chief river of Virginia is the James, a noble stream, rising in the Alleghenies and flowing for four hundred and fifty miles from the western border of the Old Dominion until it falls into Chesapeake Bay at Hampton Roads. Its sources are in a region noted for mineral springs, and the union of Jackson and Cowpasture Rivers makes the James, which flows to the base of the Blue Ridge, and there receives a smaller tributary, not inappropriately named the Calfpasture River. The James breaks through the Blue Ridge by a magnificent gorge at Balcony Falls. Seven miles away, spanning the little stream known as Cedar Brook, is the famous Natural Bridge, the wonderful arch of blue limestone two hundred and fifteen feet high, ninety feet wide, and having a span of a hundred feet thrown across the chasm, which has given to the county the name of Rockbridge. Overlooking the river and the bridge and all the country roundabout are the two noble Peaks of Otter, rising about four thousand feet, the highest mountains in that part of the Alleghenies. This wonderful bridge is situated at the extremity of a deep chasm, through which the brook flows, across the top

of which extends the rocky stratum in the form of a graceful arch. It looks as if the limestone rock had originally covered the entire stream bed, which then flowed through a subterranean tunnel, the rest of the limestone roof having fallen in and been gradually washed away. The bridge is finely situated in a grand amphitheatre surrounded by mountains. The crown of the arch is forty feet thick, the rocky walls are perpendicular, and over the top passes a public road, which, being on the same level as the immediately adjacent country, one may cross it in a coach without noticing the bridged chasm beneath. Various large forest trees grow beneath and under the arch, but are not tall enough to reach it. On the rocky abutments of the bridge are carved the names of many persons who had climbed as high as they dared on the steep face of the precipice. Highest of all, for about seventy years, was the name of Washington, who, in his youth, ascended about twenty-five feet to a point never before reached; but this feat was surpassed in 1818 by James Piper, a college student, who actually climbed from the foot to the top of the rock. In 1774 Thomas Jefferson obtained a grant of land from George III. which included the Natural Bridge, and he was long the owner, building the first house there, a log cabin with two rooms, one being for the reception of strangers. Jefferson called the bridge "a famous place that will draw the attention of the world;"

Chief Justice Marshall described it as "God's greatest miracle in stone;" and Henry Clay said it was "The bridge not made with hands, that spans a river, carries a highway, and makes two mountains one."

THE JAMES RIVER AND POWHATAN.

Following down James River, constantly receiving accessions from mountain streams, we soon come to Lynchburg, most picturesquely built on the sloping foothills of the Blue Ridge, and having fine water-power for its factories, a centre of the great tobacco industry of Virginia, supporting a population of about twenty thousand people. Lynchburg was a chief source of supply for Lee's army in Eastern Virginia until, in February, 1865, Sheridan, by a bold raid, destroyed the canal and railroads giving it communication; and, after evacuating Richmond, Lee was endeavoring to reach Lynchburg when he surrendered at Appomattox, about twenty miles to the eastward, on April 9, 1865, thus ending the Civil War. The little village of Appomattox Court House is known in the neighborhood as Clover Hill. When Lee surrendered, casualties, captures and desertions had left him barely twenty-seven thousand men, with only ten thousand muskets, thirty cannon and three hundred and fifty wagons.

The James River, east of the Blue Ridge, drains a grand agricultural district, and its coffee-colored

waters tell of the rich red soils through which it comes in the tobacco plantations all the way past Lynchburg to Richmond. In its earlier history this noted river was called the Powhatan, and it bears that name on the older maps. Powhatan, the original word, meant, in the Indian dialect, the "falls of the stream" or "the falling waters," thus named from the falls and rapids at Richmond, where the James, in the distance of nine miles, has a descent of one hundred and sixteen feet, furnishing the magnificent water-power which is the source of much of the wealth of Virginia's present capital. The old Indian sachem whose fame is so intertwined with that of Virginia took his name of Powhatan from the river. His original name was Wahunsonacock when the colonists first found him, and he then lived on York River; but it is related that he grew in power, raised himself to the command of no less than thirty tribes, and ruled all the country from southward of the James to the eastward of the Potomac as far as Chesapeake Bay. When he became great, for he was unquestionably the greatest Virginian of the seventeeth century, he changed his name and removed to the James River, just below the edge of Richmond, where, near the river bank, is now pointed out his home, still called Powhatan. It was here that the Princess Pocahontas is said to have interfered to save the life of Captain John Smith. Here still stands a precious relic in the shape of an old chim-

ney, believed to have been originally built for the Indian king's cabin by his colonist friends. It is of solid masonry, and is said to have outlasted several successive cabins which had been built up against it in Southern style. A number of cedars growing alongside, tradition describes as shadowing the very stone on which Smith's head was laid. It may not be generally known that early in the history of the colony Powhatan was crowned as a king, there having been brought out from England, for the special purpose, a crown and "a scarlet cloke and apparrell." The writer recording the ceremony says quaintly: "Foule trouble there was to make him kneele to receive his crowne. At last, by leaning hard on his shoulders, he a little stooped, and three having the crowne in their hands, put it on his head. To congratulate their kindnesse, he gave his old shoes and his mantell to Captaine Newport, telling him take them as presents to King James in return for his gifts."

THE INDIAN PRINCESS POCAHONTAS.

The James River carries a heavy commerce below Richmond, and the channel depths of the wayward and very crooked stream are maintained by an elaborate system of jetties, constructed by the Government. Both shores show the earthworks that are relics of the war, and Drewry's Bluff, with Fort Darling, the citadel of the Confederate defence of the

river, is projected across the stream. Below is Dutch Gap, where the winding river, flowing in a level plain, makes a double reverse curve, going around a considerable surface without making much actual progress. Here is the Dutch Gap Canal, which General Butler cut through the narrowest part of the long neck of land, thus avoiding Confederate batteries and saving a detour of five and a half miles; it is now used for navigation. Just below is the large plantation of Varina, where the Indian Princess Pocahontas lived after her marriage with the Englishman, John Rolfe. Its fine brick colonial mansion was the headquarters for the exchange of prisoners during the Civil War.

The brief career of Pocahontas is the great romance of the first settlement of Virginia. She was the daughter and favorite child of Powhatan, her name being taken from a running brook, and meaning the "bright streamlet between the hills." When the Indians captured Captain John Smith she was about twelve years of age. He made friends of the Indian children, and whittled playthings for them, so that Pocahontas became greatly interested in him, and the tale of her saving his life is so closely interwoven with the early history of the colony that those who declare it apocryphal have not yet been able to obliterate it from our school-books. Smith being afterwards liberated, Pocahontas always had a longing for him, was the medium of getting the colonists

food, warned them of plots, and took an interest in them even after Smith returned to England. The tale was then told her that Smith was dead. In 1614 Pocahontas, about nineteen years old, was kidnapped and taken to Jamestown, in order to carry out a plan of the Governor by which Powhatan, to save his daughter, would make friendship with the colony, and it resulted as intended. Pocahontas remained several weeks in the colony, made the acquaintance of the younger people, and fell in love with Master John Rolfe. Pocahontas returned to her father, who consented to the marriage; she was baptized at Jamestown as Lady Rebecca, and her uncle and two brothers afterwards attended the wedding, the uncle giving the Indian bride away in the little church at Jamestown, April 5, 1614. A peace of several years' duration was the consequence of this union. Two years afterwards Pocahontas and her husband proceeded to England, where she was an object of the greatest interest to all classes of people, and was presented at Court, the Queen warmly receiving her. Captain Smith visited her in London, and after saluting him she turned away her face and hid it in her hands, thus continuing for over two hours. This was due to her surprise at seeing Smith, for there is no doubt her husband was a party to the deception, he probably thinking she would never marry him while Smith was living. The winter climate of England was too severe for her,

and when about embarking to return to Virginia she suddenly died at Gravesend, in March, 1617, aged about twenty-two. She left one son, Thomas Rolfe, who was educated in London, and in after life went to Virginia, where he became a man of note and influence. From him are descended the famous children of Pocahontas—the "First Families of Virginia"—the Randolph, Bolling, Fleming and other families.

SHIRLEY, BERKELEY AND WESTOVER.

The winding James flows by Deep Bottom and Turkey Bend, and one elongated neck of land after another, passing the noted battlefield of Malvern Hill, which ended General McClellan's disastrous "Seven Days" of battles and retreat from the Chickahominy swamps in 1862. The great ridge of Malvern Hill stretches away from the river towards the northwest, and in that final battle which checked the Confederate pursuit it was a vast amphitheatre terraced with tier upon tier of artillery, the gunboats in the river joining in the Union defense. Below, on the other shore, are the spacious lowlands of Bermuda Hundred, where, in General Grant's significant phrase, General Butler was "bottled up." Here, on the eastern bank, is the plantation of Shirley, one of the famous Virginian settlements, still held by the descendants of its colonial owners—the Carters. The wide and attractive old brick colonial house, with its

hipped and pointed roof, stands behind a fringe of trees along the shore, with numerous outbuildings constructed around a quadrangle behind. It is built of bricks brought out from England, is two stories high, with a capacious front porch, and around the roof are rows of dormer windows, above which the roof runs from all sides up into a point between the tall and ample chimneys. The southern view from Shirley is across the James to the mouth of Appomattox River and City Point.

The Appomattox originates in the Blue Ridge near Lynchburg, and flows one hundred and twenty miles eastward to the James, of which it is the chief tributary. It passes Petersburg twelve miles southwest of its point of union with the James, this union being at a high bluff thrust out between the rivers, with abrupt slopes and a plateau on the top, which is well shaded. Here is the house—the home of Dr. Epps —used by General Grant as his headquarters during the operations from the south side of the James against Petersburg and Lee's army in 1864–65. Grant occupied two little log cabins on top of the bluff, just east of the house; one his dwelling and the other his office. One is still there in dilapidation, and the other is preserved as a relic in Fairmount Park, Philadelphia. A short distance away is the little town of City Point, with its ruined wharves, where an enormous business was then done in landing army supplies. To the eastward the

James flows, a steadily broadening stream, past the sloping shores on the northern bank, where, at Harrison's Landing, McClellan rested his troops after the "Seven Days," having retreated there from the battle at Malvern Hill. His camps occupied the plantations of Berkeley and Westover, the former having been the birthplace of General William Henry Harrison, who was President of the United States for a few weeks in 1841, the first President who died in office. The Berkeley House is a spacious and comfortable mansion, but it lost its grand shade-trees during the war. A short distance farther down is the quaint old Queen Anne mansion of red brick, with one wing only, the other having been burnt during the war; with pointed roof and tall chimneys, standing at the top of a beautifully sloping bank—Westover House, the most famous of the old mansions on the James. It was the home of the Byrds—grandfather, father and son—noted in Virginian colonial history, whose arms are emblazoned on the iron gates, and who sleep in the little graveyard alongside. The most renowned of these was the second, the "Honourable William Byrd of Westover, Esquire," who was the founder of both Richmond and Petersburg.

William Byrd was a man of imposing personal appearance and the highest character, and his full-length portrait in flowing periwig and lace ruffles, after Van Dyck, is preserved at Lower Brandon,

farther down the river. He inherited a large landed estate—over fifty thousand acres—and ample fortune, and was educated in England, where he was called to the bar at the Middle Temple, and made a Fellow of the Royal Society. The inscription on his Westover tomb tells that he was a friend of the learned Earl of Orrery. He held high offices in Virginia, and possessed the largest private library then in America. In connection with one Peter Jones, in 1733, he laid out both Richmond and Petersburg on lands he owned, at the head of navigation respectively on the James and the Appomattox. He left profuse journals, published since as the *Westover Manuscripts*, and they announce that Petersburg was gratefully named in honor of his companion-founder, Peter Jones, and that Richmond's name came from Byrd's vivid recollection of the outlook from Richmond Hill over the Thames in England, which he found strikingly reproduced in the soft hills and far-stretching meadows adjoining the rapids of the James, with the curving sweep of the river as it flowed away from view behind the glimmering woods. He died in 1744. Westover House was McClellan's headquarters in 1862. The estates have gone from Byrd's descendants, but the house has been completely restored, and is one of the loveliest spots on the James. Major Augustus Drewry, its recent owner, died in July, 1899, at an advanced age. Coggins Point projects opposite Westover, and noted

plantations and mansions line the river banks, bearing, with the counties, well-known English names. Here is the ruined stone Fort Powhatan, a relic of the War of 1812, with the Unionist earthworks of 1864–65 on the bluff above it. Then we get among the lowland swamps, where the cypress trees elevate their conical knees and roots above the water. The James has become a wide estuary, and the broad Chickahominy flows in between low shores, draining the swamps east of Richmond and the James. This was the "lick at which turkeys were plenty," the Indians thus recognizing in the name of the river the favorite resort of the wild turkey.

THE COLONY OF JAMESTOWN.

We have now come to the region of earliest English settlement in America, where Newport and Smith, in 1607, planted their colony of Jamestown upon a low yellow bluff on the northern river bank. It is thirty-two miles from the mouth of the James River, and the bluff, by the action of the water, has been made an island. The location was probably selected because this furnished protection from attacks. The later encroachments of the river have swept away part of the site of the early settlement, and a portion of the old church tower and some tombstones are now the only relics of the ancient town. The ruins of the tower can be seen on top of the bluff, almost overgrown with moss and vines.

Behind is the wall of the graveyard where the first settlers were buried. A couple of little cabins are the only present signs of settlement, the mansion of the Jamestown plantation being some distance down the river.

When the English colony first came to Jamestown in 1607, they were hunting for gold and for the "northwest passage" to the East Indies. In fact, most of the American colonizing began with these objects. They had an idea in Europe that America was profuse in gold and gems. In 1605 a play of "Eastward, Ho" was performed in London, in which one of the characters said: "I tell thee golde is more plentifull in Virginia than copper is with us, and for as much redde copper as I can bring, I will have thrice the weight in golde. All their pannes and pottes are pure gould, and all the chaines with which they chaine up their streetes are massie gould; all the prisoners they take are fettered in golde; and for rubies and diamonds they goe forth in holidays and gather them by the seashore to hang on their children's coates and sticke in their children's caps as commonally as our children wear saffron, gilt brooches, and groates with hoales in them." The whole party, on landing at Jamestown, started to hunt for gold. Smith wrote that among the English colonists there was "no talk, no hope, no work, but dig gold, wash gold, refine gold, loade gold." They found some shining pyrites that deceived them, and

therefore the first ship returning to England carried away a cargo of shining dirt, found entirely worthless on arrival. The second ship, after a long debate, they more wisely sent back with a cargo of cedar. They hunted for the "northwest passage," first going up the James to the falls at the site of Richmond, but returning disappointed. It was this same hunt for a route to the Pacific which afterwards took Smith up the Chickahominy, where he got among the swamps and was captured by the Indians.

The Jamestown colonists met with great discouragements. Most of them were unfitted for pioneers, and the neighboring swamps gave them malaria in the hot summer, so that nearly half perished. Smith, by his courage and enterprise, however, kept the colony alive and took charge, being their leader until captured by the Indians, and also afterwards, until his return to England. Among the first constructions at Jamestown were a storehouse and a church. These, however, were soon burnt, and a second church and storehouse were erected in September, 1608. This church was like a barn in appearance, the base being supported by crotched stakes, and the walls and roof were made of rafts, sedge and earth, which soon decayed. When Smith left Jamestown for England in 1609 the place contained about sixty houses, and was surrounded by a stockade. Smith early saw the necessity of raising

food, and determined to begin the growing of maize, or Indian corn. Consequently, early in 1608 he prevailed upon two Indians he had captured to teach the method of planting the corn. Under their direction a tract of about forty acres was planted in squares, with intervals of four feet between the holes which received the Indian corn for seed. This crop grew and was partly harvested, a good deal of it, however, being eaten green. Thus the Indian invented the method of corn-planting universally observed in the United States, and this crop of forty acres of 1608 was the first crop of the great American cereal grown by white men. Wheat brought out from England was first planted at Jamestown in 1618 on a field of about thirty acres, this being the first wheat crop grown in the United States.

Captain John Smith, before he left Jamestown, estimated that there were about fifty-five hundred Indians within a radius of sixty miles around the colony, and in his works he enumerates the various tribes. Describing their mode of life, he wrote that they grew fat or lean according to the season. When food was abundant, he said, they stuffed themselves night and day; and, unless unforeseen emergencies compelled them to arouse, they dropped asleep as soon as their stomachs were filled. So ravenous were their appetites that a colonist employing an Indian was compelled to allow him a quantity of food double that given an English laborer. In a period of

GRANT MONUMENT, FAIRMOUNT PARK, PHILADELPHIA

want or hardship, when no food was to be had, the warrior simply drew his belt more tightly about his waist to try and appease the pangs of hunger. The Indians, when the colonists arrived, were found to divide the year into five seasons, according to its varying character. These were, first, Cattapeuk, the season of blossoms; second, Cohattayough, the season when the sun rode highest in the heavens; third, Nepenough, the season when the ears of maize were large enough to be roasted; fourth, Taquetock, the season of the falling leaves, when the maize was gathered; and fifth, Cohonk, the season when long lines of wild geese appeared, flying from the north, uttering the cry suggesting the name, thus heralding the winter.

The colony was very unfortunate, and in 1617 was reduced to only five or six buildings. The church had then decayed and fallen to the ground, and a third church, fifty by twenty feet, was afterwards built. Additional settlers were sent out from England in the next two years, and the Virginians were granted a government of their own, the new Governor, Sir George Yeardley, arriving in the spring of 1619. The Company in London also sent them a communication "that those cruell laws, by which the ancient planters had soe long been governed, were now abrogated in favor of those free laws which his majesties subjects lived under in Englande." It continued by stating "That the planters might have

a hande in the governing of themselves yt was granted that a generall assemblie should be held yearly once, whereat to be present the governor and counsell with two burgesses from each plantation, freely to be elected by the inhabitants thereof, this assemblie to have power to make and ordaine whatsoever laws and orders should by them be thought good and profitable for their subsistence." The Governor consequently summoned the first "House of Burgesses" in Virginia, which met at Jamestown, July 30, 1619, the first legislative body in America. Twenty-two members took their seats in the new church at Jamestown. They are described as wearing bright-colored silk and velvet coats, with starched ruffs, and as having kept their hats on as in the English House of Commons. The Governor sat in the choir, and with him were several leading men who had been appointed by the Company on the Governor's Council. They passed various laws, chiefly about tobacco and taxes, and sent them to England, where the Company confirmed them, and afterwards, in 1621, granted the "Great Charter," which was the first Constitution of Virginia.

The colonists got into trouble with the Indians in 1622, and having killed an Indian who murdered a white man, Jamestown was attacked and the inhabitants massacred, three hundred and forty-five being killed. Governor Butler, who visited the place not long after the massacre, wrote that the houses were

the "worst in the world," and that the most wretched cottages in England were equal, if not superior, in appearance and comfort to the finest dwellings in the colony. The first houses were mostly of bark, imitating those of the Indian; and, there being neither sawmills to prepare planks nor nails to fasten them, the later constructions were usually of logs plastered with mud, with thatched roofs. The more pretentious of these were built double—"two pens and a passage," as they have been described. As late as 1675 Jamestown had only a few families, with not more than seventy-five population. Labor was always in demand there, and at first the laborers were brought out from England. There was no money, and having early learnt to raise tobacco from the Indians, this became the chief crop, and, being sure of sale in England, became the standard of value. Tobacco was the great export, twenty thousand pounds being exported in 1619, forty thousand in 1620 and sixty thousand in 1622. Everything was valued in tobacco, and this continued the practical currency for the first century. They imported a lot of copper, however, with which to make small coins for circulation. As the tobacco fluctuated in price in England, it made a very unstable standard of value. Gradually, afterwards, large amounts of gold and silver coin came into Virginia in payment for produce, thus supplanting the tobacco as a standard.

THE VIRGINIAN PLANTERS.

Land was cheap in Virginia in the early days. In 1662 the King of Mattapony sold his village and five thousand acres to the colonists for fifty match-coats. During the seventeenth century the value of land reckoned in tobacco, as sold in England, averaged for cleared ground about four shillings per acre, the shilling then having a purchasing power equal to a dollar now. It was at this time that most of the great Virginian estates along James River were formed, the colonists securing in some cases large grants. Thus, John Carter of Lancaster took up 18,570 acres, John Page 5000 acres, Richard Lee 12,000 acres, William Byrd 15,000 acres, afterwards largely increased; Robert Beverley 37,000 acres and William Fitzhugh over 50,000 acres. These were the founders of some of the most famous Virginian families. The demand for labor naturally brought Virginia within the market of the slave trader, but very few negroes were there in the earlier period. The first negroes who arrived in Virginia were disembarked at Jamestown from a Dutch privateer in 1619—twenty Africans. In 1622 there were twenty-two there, two more having landed; but it is noted that no negro was killed in the Jamestown massacre. In 1649 there were only three hundred negroes in Virginia, and in 1671 there were about two thousand. In the latter part of the seven-

teenth century the arrivals of negro slaves became more frequent—labor being in demand. The records show that the planters had great difficulty in supplying them with names, everything being ransacked for the purpose—mythology, history and geography—and hence the peculiar names they have conferred in some cases on their descendants. In 1640 a robust African man when sold commanded 2700 pounds of tobacco, and a female 2500 pounds, averaging, at the then price of tobacco, about seventeen pounds sterling for the men. Prices afterwards advanced to forty pounds sterling for the men. In 1699 all newly arrived slaves were taxed twenty shillings per head, paid by the master of the vessel.

As the colony developed, the typical dwelling became a framed log building of moderate size, with a big chimney at each end, there being no cellar and the house resting on the ground. The upper and lower floors were each divided into two rooms. Such a house, built in 1679, measuring forty by twenty feet, cost twelve hundred pounds of tobacco. Finally, when more prosperity came in the eighteenth century, the houses were developed and enlarged into more pretentious edifices, built of bricks brought out from England. These were the great colonial houses of the wealthy planters, so many of which exist until the present day. The most prosperous time in colonial Virginia was the period from 1710 until 1770. The exports of tobacco to England and flour

and other produce to the West Indies made the fortunes of the planters, so that their vast estates and large retinues of slaves made them the lordly barons whose fame spread throughout Europe, while their wealth enabled them to gather all the luxuries of furniture and ornament for their houses then attainable. It was in these noble colonial mansions, surrounded by regiments of negro servants, that the courtly Virginians of the olden time dispensed a princely hospitality, limited only by their ability to secure whatever the world produced. The stranger was always welcome at the bountiful board, and the slave children grew up amid plenty, hardly knowing what work was. This went on with more or less variation until the Civil War made its tremendous upheaval, which scattered both whites and blacks. But the typical Virginian is unchanged, continuing as open-hearted and hospitable, though his means now are much less. To all he has, the guest is welcome; but it is usually with a tinge of regret that he recalls the good old time when he might have done more.

HAMPTON ROADS AND FORTRESS MONROE.

The constantly broadening estuary of the James assumes almost the proportions of an inland sea, and in the bays encircled by the low shores are planted the seed oysters, which are gathered by fleets of small vessels for transplanting into salt-water beds. In front, near the mouth of the river, is thrust out

the long point of Newport News, with its grain elevators and shipyards, dry-docks and iron-works, the great port of the James River, which is the busy terminal of railways coming from the West. Here is a town of thirty thousand people. It was almost opposite, that in the spring of 1862 the Confederate ram "Merrimac" (then called the "Virginia"), armored with railroad rails, came suddenly out from Norfolk, and sank or disabled the American wooden naval vessels in Hampton Roads; the next day, however, being unexpectedly encountered by the novel little turret iron-clad "Monitor," which had most opportunely arrived from the upper Hudson River, where Ericsson had built her. The "Merrimac" was herself soon disabled and compelled to retire. This timely and dramatic appearance of "the little Yankee cheese-box on a raft" made a sudden and unforeseen revolution in all the naval methods and architecture of the world. Around the point of Newport News the James River debouches into one of the finest harbors of the Atlantic Coast, Hampton Roads, named from the town of Hampton on the northern shore. This is the location of a Veteran Soldiers' Home, with two thousand inmates, an extensive Soldiers' Cemetery, and of the spacious buildings of the Normal and Agricultural Institute for Negroes and Indians, where there are eight to nine hundred scholars, this being a foundation originally established by the Freedmen's Bureau, the chief ob-

ject being the training of teachers for colored and Indian schools.

The little peninsula of Old Point Comfort, which makes the northern side of the mouth of the James and juts out into Chesapeake Bay, has upon it the largest and most elaborate fortification in the United States—Fortress Monroe. It is related that when Newport and Smith first entered the bay in 1607, and were desirous of ascending the James, they coasted along the southern shore and found only shallow water. Starting out in a boat to hunt for a channel up which their ships could pass, they rowed over to the northern shore and discovered deeper water entering the James, close to this little peninsula, there being twelve fathoms depth, which so encouraged Smith that it confirmed him in naming the place Point Comfort. This channel, close inshore, could be readily defended, as it was the only passage for vessels of any draft, and consequently when the colony got established at Jamestown they built Fort Algernon at Point Comfort to protect the entrance to the James. In 1611 this fort was described as consisting of stockades and posts, without stone or brick, and containing seven small iron guns, with a garrison of forty men.

After the British invasion of Chesapeake Bay, in 1814, when they burnt the Capitol and White House at Washington, it was quickly decided that no foreign foe should be again permitted to do such a thing, and that an elaborate work should be built to defend the

entrance to the bay. General Simon Bernard, one of Napoleon's noted engineers, offered his services to the United States after the downfall of the Emperor, and he was placed in charge, with the duty of constructing, at the mouth of James River, a fortification which would command the channel into that river and to the Norfolk Navy Yard, and at the same time be a base of operations against any fleet attempting to enter the bay and menace the roadstead. Bernard built in 1819, and several following years, an elaborate fortress, with a broad moat and outlying water-battery, enclosing eighty acres, the ramparts being over two miles in circumference. It was called Fortress Monroe, after the then President James Monroe, of Virginia. Out upon an artificial island, known as the Rip-raps, built upon a shoal some two miles offshore, and in the harbor entrance, the smaller works of Fort Wool were subsequently constructed, and the two make a complete defense for the Chesapeake Bay entrance. During all the years this fortress has existed it has never had occasion to fire a gun at an enemy, but its location and strength were invaluable to the North, who held it during the Civil War. It is the seat of the Artillery School of the army. To the southward, at the waterside, are the hotels of Old Point Comfort, which is one of the favorite seaside watering-places of the South. In front is the great Hampton roadstead, usually containing fleets of wind-bound vessels and some men-of-war.

NORFOLK AND ITS NEIGHBORHOOD.

Over on the southern side of Chesapeake Bay is the Elizabeth River, in reality a tidal arm of the sea, curving around from the south to the east, and having Norfolk on its northern bank and Portsmouth opposite. The country round about is flat and low-lying, and far up the river are Gosport and the Navy Yard, the largest possessed by the United States. There are probably sixty thousand population in the three towns. The immediate surroundings are good land and mostly market gardens, but to the southward spreads the great Dismal Swamp, covering about sixteen hundred square miles, intersected by various canals, and yielding cypress, juniper and other timber. It is partly drained by the Nansemond River, on which, at the edge of the swamp, is the little town of Suffolk, whence the Jericho Run Canal leads into Lake Drummond, a body of water covering eighteen square miles and twenty-one feet above tidewater. Mrs. Harriet Beecher Stowe has woven much of the romance of this weird fastness and swamp into her tale of *Dred.* The Dismal Swamp Canal, twenty-two miles long, and recently enlarged and deepened, passes through it from Elizabeth River to the Pasquotank River of North Carolina, and the Albemarle Canal also connects with Currituck Sound. This big swamp was first explored by Colonel William Byrd, of Westover,

in 1728, when he surveyed the boundary between Virginia and North Carolina.

All about the Norfolk wharves are cotton bales, much timber, tobacco and naval stores, and immense quantities of food and garden products, not forgetting a profusion of "goobers," all awaiting shipment, for this, next to Savannah, is the greatest export port for food and other supplies on the Southern Atlantic. The "goober," or peanut, is the special crop of this part of Virginia and Carolina. The cotton compresses do a lively business in the cotton season, the powerful hydraulic pressure squeezing the bale to barely one-fourth its former size, and binding it firmly with iron bands, thus giving the steamers increased cargo. In the spring the shipment North of early fruits and vegetables is enormous, vast surfaces being devoted to their growth, the strawberry beds especially covering many acres. The oyster trade is also large. The settlement of Norfolk began in 1680, and in 1736 it was made a borough. Portsmouth was established later, but the starting of the navy yard there, which has become so extensive, gave it great impetus. Portsmouth claims that in the Civil War, in proportion to size, it sent more soldiers to the Southern armies and had more dead than any other city. The capacious naval hospital and its fine grove of trees front Portsmouth towards the harbor. Norfolk has St. Paul's Church, founded in 1730, as its chief Revolutionary relic—an

ancient building, with an old graveyard, and having in its steeple the indentation made by a cannon-shot, when a British fleet in 1776 bombarded and partly burnt the town. An old-fashioned round ball rests in the orifice; not, however, the one originally sent there by the cannoneers. Relic-hunters visiting the place have a habit of clandestinely appropriating the cannon-ball, so the sexton, with an eye to business, has some on hand ready to put into the cavity, and thus maintain the old church's patriotic reputation. A novel sight in Norfolk is its market, largely served by negroes—old "mammies" with bright bandannas tied about their heads and guarding piles of luscious fruits; funny little pickaninnies who execute all manner of athletic gyrations for stray pennies, queer old market wagons, profusions of flowers, and such a collection of the good things of life, all set in a picture so attractive that the sight is long remembered.

THE EASTERN SHORE.

Northward from Old Point Comfort and Hampton Roads the great Chesapeake Bay stretches for two hundred miles. It bisects Virginia and Maryland, and receives the rivers of both States, extending within fourteen miles of Pennsylvania, where it has as its head the greatest river of all, the Susquehanna, which the Indians appropriately called their "great island river." Its shores enclose many islands, and are indented with innumerable bays and inlets, the

alluvial soils being readily adapted to fruit and vegetable growing, and its multitudes of shallows being almost throughout a vast oyster bed. It has, all about, the haunts of wild fowl and the nestling-places of delicious fish. These shores were the home—first on the eastern side and afterwards on the western—of the Nanticokes, or "tidewater Indians," who ultimately migrated to New York to join the Iroquois or Five Nations, making that Confederacy the "Six Nations." From Cape Charles, guarding the northern entrance to the Bay, extends northward the well-known peninsula of the "Eastern Shore," a land of market gardens, strawberries and peaches, which feeds the Northern cities, and having its railroad, a part of the Pennsylvania system, running for miles over the level surface in a flat country, which enabled the builders to lay a mathematically straight pair of rails for nearly ninety miles, said to be the longest railway tangent in existence.

Chesapeake Bay is now patrolled by the oyster fleets of both Virginia and Maryland, each State having an "oyster navy" to protect its beds from predatory forays; and occasionally there arises an "oyster war" which expands to the dignity of a newspaper sensation, and sometimes results in bloodshed. The wasteful methods of oyster-dredging are said to be destroying the beds, and they are much less valuable than formerly, although measures are being projected for their protection and restoration

under Government auspices. We are told that a band of famished colonists who went in the early days to beg corn from the Indians first discovered the value of the oyster. The Indians were roasting what looked like stones in their fire, and invited the hungry colonists to partake. The opened shells disclosed the succulent bivalve, and the white men found there was other good food besides corn. All the sites of extinct Indian villages along the Chesapeake were marked by piles of oyster shells, showing they had been eaten from time immemorial.

The English colonists at Jamestown were told by the Indians of the wonders of the "Mother of Waters," as they called Chesapeake Bay, about the many great rivers pouring into it, the various tribes on its shores, and the large fur trade that could be opened with them; so that the colonists gradually came to the opinion that the upper region of the great bay was the choicest part of their province. Smith explored it and made a map in 1609, and others followed him, setting up trading-stations upon the rivers as far as the Potomac and the Patuxent. Soon this new country and its fur trade attracted the cupidity of William Claiborne, who had been appointed Treasurer of Virginia, and was sent out when King James I. made it a royal province, the king telling them they would find Claiborne "a person of qualitie and trust." He was also agent for a London Company the king had chartered to make

discoveries and engage in the fur trade. Claiborne, in 1631, established a settlement on Kent Island, the largest in the bay, about opposite Annapolis, and one hundred and thirty miles north of the James, which thrived as a trading station and next year sent its burgesses to the Assembly at Jamestown.

CALVERT AND MARYLAND.

Sir George Calvert, who had been private secretary to Lord Cecil in Queen Elizabeth's reign, and also held office under King James, upon retiring was created Baron of Baltimore in Ireland, and purchased part of Newfoundland, which he called Avalon. He sent out a colony and afterwards visited Avalon; but, being discouraged by the cold climate, he abandoned the colony, and persuaded the next king, Charles I., to give him land on both sides of Chesapeake Bay north of the Potomac. Before the deed was signed, however, Baron Baltimore died, and his son, Cecilius Calvert, succeeded him and received the grant. This was one of the greatest gifts of land ever made, extending northward from the Potomac River, including all Maryland, a broad strip of what is now Pennsylvania, all of Delaware, and a good deal of West Virginia. The charter made the grant a Palatinate, giving Lord Baltimore and his heirs absolute control of the country, freedom to trade with the whole world and make his own laws, or allow his colonists to do this. The price was the delivery of two In-

dian arrows a year at the Castle of Windsor, and one-fifth of all the gold and silver found. This grant was dated on June 20, 1632, and the name first intended by Calvert for his colony was Crescentia; but in the charter it was styled *Terra Mariæ*, after Queen Henrietta Maria, or "Mary's Land." The expedition came out the following winter, leaving the Isle of Wight in November in two vessels, named the "Ark" and the "Dove," under command of Leonard Calvert, Cecil's brother, there being two hundred emigrants, nearly all Roman Catholics, like their chief, and mostly gentlemen of fortune and respectability. While the colony was Catholic, Cecil Calvert inculcated complete toleration. In his letter of instructions he wrote: "Preserve unity and peace on shipboard amongst all passengers; and suffer no offence to be given to any of the Protestants; for this end cause all acts of the Roman Catholic religion to be done as privately as may be;" and he also told his brother, the Governor, "to treat all Protestants with as much mildness and favor as justice would permit," this to be observed "at land as well as at sea." In March, 1633, they entered the Chesapeake and sailed up to the Potomac River, landing at an island and setting up a cross, claiming the country for Christ and for England.

The "Ark" anchored, and the smaller "Dove" was sent cruising along the shore of the Potomac above Point Lookout, "to make choice of a place

probable to be healthfull and fruitfull," which might be easily fortified, and "convenient for trade both with the English and savages." The little "Dove" sailed some distance up the Potomac, examining the shore, and encountered various Indians, who were astonished when they saw the vessel, diminutive, yet so much larger than their canoes, and said they would like to see the tree from which that great canoe was hollowed out, for they knew nothing of the method of construction. The colonists talked with the Indians, having an interpreter, and Leonard Calvert asked a chief: "Shall we stay here, or shall we go back?" To this a mysterious answer was made: "You may do as you think best." Calvert did not like this, and decided to land nearer the bay, so his vessel dropped down the river again, and they finally landed on a stream where they found the Indian village of Yoacamoco. The Indians were very friendly, sold part of their village for some axes and bright cloth, gave up their best wigwams to Calvert and his colonists, and in one of these the Jesuit fathers held a solemn service, dedicating the settlement to St. Mary; and thus was founded the capital of the new Palatinate of Maryland. Under Calvert's wise rule the colony prospered, kept up friendliness with the Indians, enjoyed a lucrative trade, and, after a long struggle, ultimately managed to make Claiborne abandon the settlement on Kent Island, which became part of Maryland. To the northward of them

was the estuary of the Patuxent River, meaning "the stream at the little falls." St. Mary's County is the peninsula between the Patuxent and the Potomac, terminating at Point Lookout, and a quiet and restful farming country to-day. Leonardstown, on the Patuxent, named after Leonard Calvert, is the county-seat; but the ancient village of St. Mary's, the original colony and capital, afterwards superseded by Annapolis, still exists, though only a few scattered bricks remain to mark the site of the old fort and town. At St. Inigoe's is the quaint colonial home of the Jesuit fathers who accompanied Calvert, and its especial pride is a sweet-toned bell, brought out from England in 1685, which still rings the Angelus. At Kent Island scarcely a vestige remains of Claiborne's trading-post and settlement.

THE MARYLAND CAPITAL.

The settlers of Maryland were not all Roman Catholics, however, for Puritan refugees came in there. Above the Patuxent is the estuary of the Severn River, and here, in a beautiful situation, is Annapolis, the capital of Maryland, which has about eight thousand inhabitants, and was originally colonized in 1649 by Puritans driven from the James River in Virginia by the Episcopalians in control there. The settlement was at first called Providence, and Richard Preston, the eminent Quaker, was long its commander. Afterwards it was named

Anne Arundel Town, after Lady Baltimore, which still is the name of its county, although the town came to be finally known as Annapolis, from Queen Anne, at the beginning of the eighteenth century, who gave it valuable presents. It is now best known as the seat of the United States Naval Academy, which has a fine establishment there, founded by George Bancroft, the historian, when he was Secretary of the Navy, in 1845. Its ancient defensive work, Fort Severn, has been roofed over, and is the Academy gymnasium. The city was made the capital of Maryland in 1794, the government being then removed from St. Mary's, and the State Capitol is a massive brick structure, standing on an eminence, with a lofty dome and cupola, from which there is a fine view of the surrounding country and over Chesapeake Bay. In the Senate Chamber General Washington surrendered his Commission to the American Colonial Congress which met there in December, 1783, and in it also assembled the first Constitutional Convention of the United States, in 1786. In front of the building is a colossal statue of Chief Justice Taney, of the Supreme Court of the United States, a native of Maryland, who died in 1864. Annapolis formerly had an extensive commerce and amassed much wealth, until eclipsed by the growth of Baltimore, and now its chief trade, like so many of the towns of the Chesapeake, is in oysters.

THE MONUMENTAL CITY.

The head of Chesapeake Bay, on either side of the Susquehanna River, is composed of various broad estuaries, with small streams entering them. To the eastward the chief is Elk River, and to the westward are the Gunpowder and Bush Rivers, with others. Not far above the Severn is the wide tidal estuary of the Patapsco, so named by the Indians to describe its peculiarity, the word meaning "a stream caused by back or tidewater containing froth." A few miles up this estuary is the great city and port of the Chesapeake, Baltimore, so named in honor of Lord Baltimore, and containing, with its suburbs, over six hundred thousand people. The spreading arms of the Patapsco, around which the city is built, provide an ample harbor, their irregular shores making plenty of dock room, and the two great railways from the north and west to Washington, which go under the town through an elaborate system of tunnels, give it a lucrative foreign trade in produce brought for shipment abroad. From the harbor there are long and narrow docks, and an inner "Basin" extending into the city, and across the heads of these is Pratt Street. This highway is famous as the scene of the first bloodshed of the Civil War. The Northern troops, hastily summoned to Washington, were marching along it from one railway station to the other on April 19, 1861, when a Baltimore mob, sympathizing

with the South, attacked them. In the riot and conflict that followed eleven were killed and twenty-six were wounded. A creek, called Jones's Falls, coming down a deep valley from the northward into the harbor, divides the city into two almost equal sections, and in the lower part is walled in, with a street on either side. Colonel David Jones, who was the original white inhabitant of the north side of Baltimore harbor, gave this stream his name about 1680, before anyone expected even a village to be located there. A settlement afterwards began eastward of the creek, known as Jonestown, while Baltimore was not started until 1730, being laid out westward of the creek and around the head of the "Basin," the plan covering sixty acres. This was called New Town, as the other was popularly termed Old Town, but they subsequently were united as Baltimore, having in 1752 about two hundred people.

Baltimore is rectangular in plan and picturesque, covering an undulating surface, the hills, which are many, inclining either to Jones's Falls or the harbor. Its popular title is the "Monumental City," given because it was the first American city that built fine monuments. At the beginning of the nineteenth century the State of Maryland erected on Charles Street a monument to General Washington, rising one hundred and ninety-five feet, a Doric shaft of white marble surmounted by his statue and upon a base fifty feet square. This splendid monument

stands in a broadened avenue and at the summit of a hill, surrounded by tasteful lawns and flower gardens, with a fountain in front. It makes an attractive centre for Mount Vernon Place, which contains one of the finest collections of buildings in the city, and presents a scene essentially Parisian. Here are the Peabody Institute and the Garrett Mansion, both impressive buildings. Baltimore has a "Battle Monument," located on Calvert Street, in Monument Square, a marble shaft fifty-three feet high, marking the British invasion of 1814, and erected in memory of the men of Baltimore who fell in battle just outside the city, when the British forces marched from Elk River to Washington and burnt the Capitol, and the British fleet came up the Patapsco and shelled the town. The city also has other fine monuments, so that its popular name is well deserved.

The City Hall is the chief building of Baltimore, a marble structure in Renaissance, costing $2,000,000, its elaborate dome rising two hundred and sixty feet, and giving a magnificent view over the city and harbor. There are two noted churches, the Mount Vernon Methodist Church, of greenstone, with buff and red facings and polished granite columns, being the finest, although the First Presbyterian Church, nearby, is regarded as the most elaborate specimen of Lancet-Gothic architecture in the country, its spire rising two hundred and sixty-eight feet. The Roman Catholic Cathedral is an attractive granite church,

containing paintings presented by Louis XVI. and Charles X. of France. Cardinal Archbishop Gibbons, of Baltimore, is the Roman Catholic Primate of the United States. The greatest charities of the city are the Johns Hopkins Hospital and the Johns Hopkins University, endowed by a Baltimore merchant who died in 1873, the joint endowments being $6,500,000. Hopkins was shrewd and penurious, and John W. Garrett persuaded him to make these princely endowments, much of his fortune being invested in the Baltimore and Ohio Railroad, of which Garrett was President in its days of greatest prosperity. This railroad is the chief Baltimore institution, giving it a direct route to the Mississippi Valley, and was the first started of the great American trunk railways, its origin dating from 1826, when the movement began for its charter, which was granted by the Maryland Legislature the next year. This charter conferred most comprehensive powers, and the story is told that when it was being read in that body one of the members interrupted, saying: "Stop, man, you are asking more than the Lord's Prayer." The reply was that it was all necessary, and the more asked, the more would be secured. The interrupter, convinced, responded: "Right, man; go on." The corner-stone of the railway was laid July 4, 1828, beginning the route from Baltimore, up the Potomac and through the Alleghenies to the Ohio River.

DRUID HILL AND FORT M'HENRY.

Baltimore is proud of the great art collection of Henry Walters in Mount Vernon Place, exhibited for a fee for the benefit of the poor; and it also has had as a noted resident Jerome Bonaparte, brother of Napoleon, who married, and then discarded by Napoleon's order, Miss Patterson, a Baltimore lady. Dr. Oliver Wendell Holmes has remarked that three short American poems, each the best of its kind, were written in Baltimore: Poe's *Raven*, Randall's *Maryland, My Maryland*, and Key's *Star-Spangled Banner*. It is also proud of its park—"Druid Hill"—a splendid pleasure-ground of seven hundred acres, owing much of its beauty to the fact that it had been preserved and developed as a private park for a century before passing under control of the city. The route to it is by the magnificent Eutaw Place, and the stately entrance gateway opens upon an avenue lined on either hand by long rows of flower vases on high pedestals, laid out alongside Druid Lake, the chief water-reservoir. The Park has an undulating surface of woodland and meadow, with grand old trees and splendid lawns, making a scene decidedly English, not overwrought by art, but mainly left in its natural condition. The mansion-house of the former owner, now a restaurant, occupies a commanding position, and on the northern side the land rises to Prospect Hill, with an expan-

THE MOUNT OF THE HOLY CROSS

sive view all around the horizon and eastward to Chesapeake Bay.

In this beautiful park the higher grounds are used for water-reservoirs. Baltimore has the advantage of receiving its supply by gravity from the Gunpowder River to the northward, where a lake has been formed, the pure water being brought through a tunnel for seven miles to the reservoirs, of which there are eight, with a capacity of 2,275,000,000 gallons, and capable of supplying 300,000,000 gallons daily. These reservoirs appear as pleasant lakes, Montebello and Roland, with Druid Lake, being the chief. Across the ravine of Jones's Falls is Baltimore's chief cemetery, Greenmount, a pretty ground, with gentle hills and vales. Here, in a spot selected by herself, is buried Jerome's discarded wife, Madame Patterson-Bonaparte, whose checkered history is Baltimore's chief romance. Here also lie Junius Brutus Booth, the tragedian, and his family, among them John Wilkes Booth, who murdered President Lincoln.

The most significant sight of Baltimore, however, is its old Fort McHenry—down in the harbor, on the extreme end of Locust Point, originally called Whetstone Point, where the Patapsco River divides—built on a low-lying esplanade, with green banks sloping almost to the water. It was the strategic position of this small but strong work, thoroughly controlling the city as well as the harbor entrance, that held Balti-

more during the early movements of the Civil War, and maintained the road from the North to Washington. Its greatest memory, however, and, by the association, probably the greatest celebrity Baltimore enjoys, comes from the flag on the staff now quietly waving over its parapets. Whetstone Point had been fortified during the Revolution, but in 1794 Maryland ceded it to the United States, and the people of Baltimore raised the money to build the present fort, which was named after James McHenry, who had been one of the framers of the Federal Constitution and was Secretary of War under President Washington. When Admiral Cockburn's British fleet came up the Chesapeake in September, 1814, the Maryland poet, Francis Scott Key, was an aid to General Smith at Bladensburg. An intimate friend had been taken prisoner on board one of the ships, and Key was sent in a boat to effect his release by exchange. The Admiral told Key he would have to detain him aboard for a day or two, as they were proceeding to attack Baltimore. Thus Key remained among the enemy, an unwilling witness of the bombardment on September 12th, which continued throughout the night. In the early morning the attack was abandoned, the flag was unharmed, and the British ships dropped down the Patapsco.

Key wrote his poem on the backs of letters, with a barrel-head for a desk, and being landed next day he showed it to friends, and then made a fresh

copy. It was taken to the office of the *Baltimore American* and published anonymously in a handbill, afterwards appearing in the issue of that newspaper on September 21, 1814. The tune was "Anacreon in Heaven," and there was a brief introduction describing the circumstances under which it was written. It was first sung in the Baltimore Theatre, October 12th of that year, and afterwards became popular. The flag which floated over Fort McHenry on that memorable night is still preserved. Fired by patriotic impulses, various ladies of Baltimore had made this flag, among them being Mrs. Mary Pickersgill, who is described as a daughter of Betsy Ross, of Philadelphia, who made the original sample-flag during the Revolution. The Fort McHenry flag contains about four hundred yards of bunting and is nearly square, measuring twenty-nine by thirty-two feet. It has fifteen stars and fifteen stripes, which was then the official regulation, there being fifteen States in the American Union. The poem of the *Star-Spangled Banner*, thus inspired and written, has become the great American patriotic anthem, and has carried everywhere the fame of the fort, the city, and the flowery flag of the United States. The following is the song, with title and introduction, as first published:

DEFENCE OF FORT M'HENRY.

TUNE—"*Anacreon in Heaven.*"

O! say can you see by the dawn's early light,
What so proudly we hailed at the twilight's last gleaming,

Whose broad stripes and bright stars through the perilous fight,
O'er the ramparts we watch'd, were so gallantly streaming?
And the Rockets' red glare, the Bombs bursting in air,
Gave proof through the night that our Flag was still there;
O! say does that star-spangled banner yet wave
O'er the land of the free, and the home of the brave?

On the shore dimly seen through the mists of the deep,
Where the foe's haughty host in dread silence reposes;
What is that which the breeze, o'er the towering steep,
As it fitfully glows, half conceals, half discloses?
Now it catches the gleam of the morning's first beam,
In full glory reflected now shines in the stream.
'Tis the star-spangled banner, O! long may it wave
O'er the land of the free, and the home of the brave!

And where is that band who so vauntingly swore
That the havoc of war and the battle's confusion,
A home and a country should leave us no more?
Their blood has washed out their foul steps pollution.
No refuge could save the hireling and slave
From the terror of flight or the gloom of the grave,
And the star-spangled banner in triumph doth wave
O'er the land of the free, and the home of the brave!

O! thus be it ever when freemen shall stand
Between their lov'd homes and the war's desolation,
Blest with vict'ry and peace, may the Heav'n rescued land,
Praise the Power that hath made and preserv'd us a nation!
Then conquer we must, when our cause it is just,
And this is our motto: "In God is our Trust."
And the star-spangled banner in triumph shall wave
O'er the land of the free, and the home of the brave!

THE GREAT THEATRE OF THE CIVIL WAR.

II.

THE GREAT THEATRE OF THE CIVIL WAR.

On to Richmond—Horace Greeley's Editorial Standard—The Conflict's Ebb and Flow—The Two Battles of Bull Run—Arlington—Manassas—McDowell against Beauregard—Lee and Jackson against Pope—Antietam—The Emancipation Proclamation—Fredericksburg—Burnside against Lee—Chancellorsville—Lee and Jackson against Hooker—Death of Stonewall Jackson—Guinney Station—The Wilderness—Mine Run—Grant's Southern March—Battles of the Wilderness—Spottsylvania—Hanover Court-House—Ashland—Richmond—The Capitol—Washington's Statues—Stonewall Jackson's Statue—Confederate White House—General Lee's House—The First House—St. John's Church—Patrick Henry—Libby Hill and Prison—Belle Isle—Rocketts—Hollywood Cemetery—Noted Graves—McClellan's Siege of Richmond—Drewry's Bluff—Chickahominy Swamps—Fair Oaks—Seven Days' Battles—Gaines' Mill—Cold Harbor—Malvern Hill—Harrison's Landing—Grant's Siege of Richmond—Second Battle of Cold Harbor—Bermuda Hundred—Petersburg—Capture of Richmond—Kilpatrick's Raid—Piedmont—Charlottesville—University of Virginia—Monticello—Thomas Jefferson—Shenandoah Valley—Cross Keys—Jackson's Exploits—Cedar Mountain—General Sheridan—Cedar Creek—Sheridan against Early—Luray Cavern—Battlefield of Gettysburg—Lee Marches into Pennsylvania—Hooker Resigns—Meade against Lee—Gettysburg Topography—Seminary Ridge—Cemetery Ridge—The Round Tops—Confederate Advance to Carlisle and the Susquehanna—Three Days' Battle—Reynolds Killed—The Round Tops Attacked—General Sickles Wounded in Peach Orchard—Ewell Repulsed at Cemetery—Pickett's Charge and Repulse—Cushing and Armistead Killed—High-Water Mark Monument—Lee Retreats—Gettysburg

Monuments—Jenny Wade—National Cemetery—Lincoln's Immortal Dedication—Valley of Death—Massachusetts Color-Bearer—The Reunited Union.

ON TO RICHMOND.

Lay down the Axe ; fling by the spade :
Leave in its track the toiling plough ;
The rifle and the bayonet blade
For arms like yours were fitter now ;
And let the hands that ply the pen
Quit the light task, and learn to wield
The horseman's crooked brand, and rein
The charger on the battlefield.

THUS trumpeted William Cullen Bryant in "Our Country's Call," while the most powerful American editor of the time of the Civil War, Horace Greeley, raised his standard at the head of the *New York Tribune's* editorial page early in 1861 with the words "On to Richmond." The region between Washington and Richmond, and much of the adjacent country stretching southward beyond James River and northward into Pennsylvania, will always be historic because of the momentous movements, sanguinary conflicts and wonderful strategy of the great American Civil War from 1861 to 1865. We have described the environment of Chesapeake Bay, and now proceed to a consideration of this noted region west of the bay, where the tide of battle repeatedly ebbed and flowed. The first northern invasion of the Virginia Peninsula and the abortive siege of Richmond in the summer of 1862 were followed by

McClellan's retreat, Pope's defeat and the southern invasion of Maryland, which was checked at Antietam in the autumn. The northern attacks at Fredericksburg in December and at Chancellorsville in the spring of 1863 were followed by the invasion of Pennsylvania, checked at Gettysburg, the "high-water mark" of the rebellion; and Grant's march down through "the Wilderness" in 1864, followed by his gradual advances south of the James, forced the evacuation of Richmond, and Lee's final surrender at Appomattox in 1865.

THE TWO BATTLES OF BULL RUN.

The main route from Washington to the South crossed the Potomac, then as now, by the "Long Bridge," passing in full view of the yellow Arlington House, fronted by its columned porch. This historic building was the home of General Robert E. Lee in his early life, the chief Confederate Commander during the Civil War. The estate is now a vast cemetery, and upon it and all about to the westward are the remains of the forts and earthworks erected for the defence of Washington. After the war began, in April, 1861, the Northern troops were gradually assembled in and around Washington; but there came an imperative demand from the country that they should go forth and give the Confederates battle and capture Richmond before their Congress could meet, the opening of the session being fixed

for July 20th. The Southern armies were entrenched at Manassas Junction, west of Washington, and at Winchester to the northwest, and they were making forays almost in sight of Washington. General McDowell, with nearly forty thousand men, marched out of the Washington fortifications on July 17th to attack General Beauregard at Manassas. The Confederates brought their Winchester army hastily down, and took position along the banks of Bull Run, a tributary of the Occoquan, their lines stretching for about eight miles. McDowell attacked on the morning of the 21st, each side having about twenty-eight thousand available men. The conflict lasted with varying success most of the day, McDowell being finally beaten and retreating to Washington.

Thirteen months later, after McClellan's retreat from Richmond, was fought in almost the same place, on August 29 and 30, 1862, the second battle of Bull Run. General Pope had a considerable force in Northern Virginia, and when McClellan, whom Pope superseded, retreated from before Richmond, and started on his return from James River, Lee moved nearly his whole army up from Richmond, hoping to fall upon Pope before McClellan could join him. On August 22d the opposing forces confronted each other along the Rappahannock, when General Stuart, with the Confederate cavalry, made a raid around Pope's lines to the rear, reaching that general's headquarters and capturing his personal baggage, in which

was his despatch book describing the position of the whole Northern army. This gave Lee such valuable information that on the 25th he sent Stonewall Jackson with thirty thousand men, who, by a forced march, went around the western side of the Bull Run Mountains, came east again by the Thoroughfare Gap, and on the night of the 27th was in Pope's rear, and had cut his railroad connections and captured his supplies at Manassas. Pope, discovering the flanking movement, began falling back towards Manassas, and Jackson then withdrew towards the Gap, waiting for Lee to come up. There were various strategic movements afterwards, with fighting on the 29th; and on the 30th the Confederate wings had enclosed as in a vise Pope's forces to the west of Bull Run, when, after some terrific combats, Pope retreated across Bull Run towards Washington. Pope had about thirty-five thousand men and Lee forty-six thousand engaged in this battle. During the night of September 2d Jackson made a reconnoissance towards Washington, in which the Union Generals Stevens and Kearney were killed at Chantilly, and the authorities became so apprehensive of an attack upon the Capital that they ordered the whole army to fall back behind the Washington defenses. Pope was then relieved, at his own request, and the command restored to McClellan. The Confederates marched northward across the Potomac and McClellan followed, ending with the battles of South Moun-

tain and Antietam, later in September, when Lee retreated and recrossed the Potomac into Virginia on the 18th. The significant result of this conflict and withdrawal was the issue of the famous Emancipation Proclamation. President Lincoln had made a vow that if Lee was driven back from Maryland he would issue a proclamation abolishing slavery, which was done September 22, 1862.

FREDERICKSBURG AND THE WILDERNESS.

The route from Washington to Richmond skirts the Potomac for a long distance south of Alexandria, winding among hills and forests, crossing various broad creeks and bayous, among them the Occoquan, the outlet of Bull Run, and then diverges towards the Rappahannock. This is more historic ground, for the terrible battle of Fredericksburg was fought here in December, 1862, and the battle of Chancellorsville, to the westward, in May, 1863, where Stonewall Jackson lost his life. The "Wilderness" is to the southward of the Rappahannock, occupying about two hundred square miles, a plateau sloping to cultivated lowlands on every side. The original forests were long ago cut off, and a dense growth of scrub timber and brambles covered nearly the whole surface, with an occasional patch of woodland or a clearing. After the battle of Antietam the anxiety for another forward movement to Richmond led the Administration to remove McClellan, and then General

Burnside took command. His troops crossed the Rappahannock in December to attack General Lee's Confederate position on the Heights of Marye, where they were strongly entrenched; but the attack failed, the shattered army after great carnage withdrawing to the north bank of the river, and it lay there for months in winter quarters. Burnside was superseded by General Hooker, and in May, 1863, the Northern army again crossed the Rappahannock at several fords above Fredericksburg and started for Richmond. Lee quickly marched westward from Fredericksburg, and Lee and Hooker faced each other at Chancellorsville. Then came another of Stonewall Jackson's brilliant flank movements. Chancellorsville is on the eastern border of the Wilderness, and Jackson, making a long detour to the south and west through that desolate region, got around and behind Hooker's right flank, surprised him, and sent General Howard's entire corps in panic down upon the rest of the Union forces, making the greatest surprise of the war. During that same night Jackson, after his victory, was accidentally shot by his own men, a blow from which the Confederacy never recovered. Twelve miles south of Fredericksburg, at Guinney Station, is the little house where Jackson died. He and his aides, after reconnoitering, had returned within the Confederate lines, and the pickets, mistaking them for the enemy, fired into the party. Several of his escort were killed and Jackson was shot in

three places, an arm being shattered. Being put upon a litter one of the bearers stumbled, and Jackson was additionally injured by being thrown to the ground. The arm was amputated, but afterwards pneumonia set in, which was the immediate cause of his death. He lingered a week, dying May 10th, in his fortieth year, his last words, dreamily spoken, being: "Let us cross over the river and rest under the shade of the trees." It is said this loss of his ablest lieutenant had such an effect upon Lee that he afterwards aged rapidly, and his hair quickly whitened. The spot where Jackson was shot is alongside the Orange Plank Road, and is marked by a granite monument. Jackson is buried at Lexington, Virginia, where he had previously been a professor in the Military Academy. Hooker withdrew across the Rappahannock, Lee started northward, Hooker was succeeded by Meade, and the battle of Gettysburg was fought at the beginning of July.

Then came another movement towards Richmond, late in the year 1863. Meade marched down to the Wilderness in November, had heavy skirmishing and fought the battle of Mine Run on its western border, and then went back and into winter quarters. General Grant came from the West, took command, and early in May, 1864, started on his great march to Richmond through the Wilderness, with Lee constantly fighting on his right flank and front. There followed during that month a series of sanguinary

battles, in this inhospitable region, in which the losses of the two armies exceeded sixty thousand men. While moving southward, Grant faced and fought generally westward. It took him ten days to progress a dozen miles, and he could only move during the lulls in the fighting, the advance being usually made by changing one corps after another from the right to the left by marching in the rear of the main body, thus gradually prolonging the left wing southward through the forbidding country. Lee pressed forward into the vacated space, fortifying and fighting, his object being to force Grant eastward and away from Richmond, which was towards the south. "More desperate fighting has not been witnessed upon this Continent," said Grant of this struggle in the Wilderness; and later he wrote to Washington the famous declaration of his intention "to fight it out on this line if it takes all summer." The whole of this desolate region south and west of Fredericksburg and down to Spottsylvania is filled with the remains of the fortifications constructed in these memorable battles. Grant said that "In every change of position or halt for the night, whether confronting the enemy or not, the moment arms were stacked the men entrenched themselves," adding, "It was wonderful how quickly they could construct defenses of considerable strength." Thus the way was worked, by shovel and shell and musket and axe, through the Wilderness. There is a plan afoot for acquiring

these battlefields and the connecting roads, so as to preserve this historic ground as a public reservation.

The railway route to Richmond goes through the Wilderness, thinly peopled, sparsely cultivated, and exhibiting a few negro settlements, where they sun themselves alongside their cabins and watch the trains go by. There is an occasional horse or cow, but almost the only animals visible are the nimble-footed and hungry-looking "razor-backed" hogs that range the scrub timber in search of a precarious living. Once in awhile is seen an old homestead that has survived the ruin of the war, but the few buildings are generally most primitive, the favorite style being a small wooden cabin set alongside a huge brick chimney. It is said the chimney is first built, and if the draught is all right they then build the little cabin over against it and move in the family. The agriculture does not appear much better until Richmond is approached, where the surface of the country improves. At Hanover Court House are more signs of battlefields, for here McClellan had his early conflicts in besieging Richmond in 1862, while Grant came down from the Wilderness and had the battles of the North Anna near the end of May, 1864, and of Cold Harbor in June, after which he moved his army to the south side of James River. Ashland, sixteen miles north of Richmond, is in an attractive region, and is a favorite place of suburban residence.

This was the birthplace of Henry Clay, in 1777, and is the seat of Randolph Macon College.

THE CITY OF RICHMOND.

Richmond, the capital of Virginia, has about one hundred and thirty thousand population, and occupies a delightful situation. The James River flows around a grand curve from the northwest to the south, and pours over falls and rapids, which display many little cascades among a maze of diminutive islands. There are on the northern bank two or three large hills and several smaller ones, and Richmond is built upon these, it is said like Rome upon her seven hills. The State Capitol and a broad white penitentiary crown two of the highest. The town was founded at the falls of the James in 1737, and the capital of Virginia was moved here from Williamsburg in 1779, when there was only a small population. The place did not have much history, however, until it became the Capital of the Confederacy, and then the strong efforts made to capture it and the vigorous defence gave it world-wide fame. Beginning in 1862 it was made an impregnable fortress, and its fall, when the Confederate flank was turned in 1865 through the capture of Petersburg, resulted from General Lee's retreat westward and his final surrender at Appomattox. When Lee abandoned Petersburg there was a panic in Richmond, with riot and pillage; the bridges, storehouses and mills were fired, and nearly

one-third of the city burnt. It has since, however, been rebuilt in better style, and has extensive manufactures and a profitable trade.

The centre of Richmond is a park of twelve acres, surrounding the Capitol, a venerable building upon the summit of Shockoe Hill, and the most conspicuous structure in the city. It was built just after the American Revolution, the plan having been brought from France by Thomas Jefferson, and modelled from the ancient Roman temple of the *Maison Carrée* at Nismes, the front being a fine Ionic portico. From the roof, elevated high above every surrounding building, there is an excellent view, disclosing the grand sweep of the river among the islands and rapids, going off to the south, where it disappears among the hills behind Drewry's Bluff, below the town. The square-block plan with streets crossing at right angles is well displayed, and the abrupt sides of some of the hills, where they have been cut away, disclose the high-colored, reddish-yellow soils which have been so prolific in tobacco culture, and give the scene such brilliant hues, as well as dye the river a chocolate color in times of freshet. The city spreads over a wide surface, and has populous suburbs on the lower lands south of the James. This Capitol was the meeting-place of the Confederate Congress, and the locality of all the statecraft of the "Lost Cause." It contains the battle-flags of the Virginia troops and other relics, and in a gallery built around the rotunda

are hung the portraits of the Virginia Governors and of the three great military chiefs, Lee, Johnston and Jackson. Upon the floor beneath is Houdon's famous statue of Washington, made while he was yet alive. In 1785, the talented French sculptor accompanied Franklin to this country to prepare the model for the statue, which had been ordered by the Virginia Government. He spent two weeks at Mount Vernon with Washington, taking casts of his face, head and upper portion of the body, with minute measurements, and then returned to Paris. The statue was finished in 1788, and is regarded as the most accurate reproduction of Washington existing. A statue of Henry Clay and a bust of Lafayette are also in the rotunda.

On the esplanade north of the Capitol is Crawford's bronze equestrian statue of Washington upon a massive granite pedestal, one of the most attractive and elaborate bronzes ever made. The horse is half thrown upon his haunches, giving the statue exceeding spirit, while upon smaller pedestals around stand six heroic statues in bronze of Virginia statesmen of various periods—Patrick Henry, Thomas Jefferson, Thomas Nelson, George Mason, Andrew Lewis and Chief Justice John Marshall—the whole adorned with appropriate emblems. This artistic masterpiece was constructed at a cost of $260,000. In the centre of the esplanade is Foley's bronze statue of Stonewall Jackson, sent from London in

1875 by a number of his English admirers as a gift to the State of Virginia. It is of heroic size, standing upon a pedestal of Virginia granite, and is a striking reproduction. The inscription is: "Presented by English gentlemen as a tribute of admiration for the soldier and patriot, Thomas J. Jackson, and gratefully accepted by Virginia in the name of the Southern people." Beneath is inscribed in the granite the remark giving his sobriquet, which was made at the first battle of Bull Run in 1862, where Jackson commanded a brigade. At a time when the day was apparently lost, his troops made so firm a stand that some one, in admiration, called out the words that became immortal: "Look, there is Jackson standing like a stone wall!" A short distance from the Capitol is the "Confederate White House," a square-built dwelling, with a high porch in the rear and a small portico in front. Here lived Jefferson Davis during his career as President of the Confederacy; it is now a museum of war relics. Nearby is St. Paul's Episcopal Church, where Davis was attending service on the eventful Sunday morning in April, 1865, when he was brought the fateful telegram from General Lee which said that Richmond must be immediately evacuated. In the central part of the residential quarter, on Franklin Street, is the plain brick house which during the Civil War was the home of General Lee. It is related that after the Appomattox surrender, when he returned to this

house, the people of Richmond got an idea that he was suffering privations and his family needed the necessaries of life. His son, Fitz Hugh Lee, afterwards said that the people then vied with each other in sending him everything imaginable. So generous were the gifts that the upper parts of the house were filled with barrels of flour, meats and many other things, and the supplies became so bountiful that Lee directed their distribution among the poor. This house is now occupied by the Virginia Historical Society. A magnificent equestrian statue of General Lee was erected on Park Avenue in 1890.

Some Richmond memorials, however, antedate the Civil War. Its "first house"—a low, steep-roofed stone cabin on the Main street, said to have been there when the town site was first laid out—is an object of homage. The popular idea is that the Indian King Powhatan originally lived in this house, but it was probably constructed after his time. Not far away, upon Richmond or Church Hill, stands St. John's Church among the old gravestones in a spacious churchyard. It was built in 1740—a little wooden church with a small steeple. Here the first Virginian Convention was held which paved the way for the Revolution in 1775, and listened to Patrick Henry's impassioned speech—"Give me liberty or give me death." The pew in which he stood while speaking is still preserved. An adjoining eminence is called Libby Hill, where lived Luther Libby, who

owned most of the land thereabout. Under its shadow was the Libby Prison of the Civil War, since removed to Chicago for exhibition. It had been a tobacco warehouse, occupied by Libby & Co., but during the war it held at various times over fifty thousand Northern prisoners. All the captured soldiers were first taken to Libby, the commissioned officers remaining there, while the privates were sent to points in the interior. The most noted event in the history of this prison was the boring of a tunnel through the eastern wall, in February, 1864, by which one hundred and nine prisoners, led by Colonel Streight, managed to escape into an adjoining stable and storehouse, and though more than half of them were recaptured, the others got safely out of Richmond and into the Union lines.

The water power of the James River supplies huge flour mills and other factories, and alongside the stream are the extensive Tredegar Iron Works at the base of Gamble Hill, one of the largest iron and steel works in the Southern States. Here were made the Confederate cannon, shot and shell, and the primitive armor plates for their few warships. This hill also overlooks the James River and Kanawha Canal, an interior water way going westward beyond the Alleghenies. In mid-river above is Belle Isle, a broad, flat island, which during the war was a place of imprisonment for private soldiers, but upon it is now an iron mill. Along the lower river are the

wharves and shipping, in the section called Rocketts, and here are also the tobacco storehouses and factories, the chief Richmond industry, for it is the world's leading tobacco mart, receiving and distributing most of the product of the rich soils of Virginia, Kentucky and Carolina. The pungent odor generally pervades the town, for whichever way the wind may blow it wafts the perfume of a tobacco or cigarette factory. The Tobacco Exchange is the business centre, and this industry is of the first importance. The modern-built City Hall, adjacent to the Capitol Park, is one of Richmond's finest buildings.

In the western suburbs, upon the river bank, and in a lovely position, is the famous Hollywood Cemetery, the terraced sides of its ravines being occupied by mausoleums and graves, while in front the rushing rapids roar a requiem for the dead. The foliage is luxuriant; and, while occupying only about eighty acres, it is a most beautiful burial-place. Here are interred two Virginia Presidents—James Monroe and John Tyler. An elaborate monument marks the former, and a magnificent tree is planted at Tyler's grave—his daughter, buried nearby, having for a monument a tasteful figure of the Virgin. The Hollywood Cemetery Association is to place a monument on Tyler's grave. Here are also buried Confederate Generals A. P. Hill, J. E. B. Stuart, the dashing cavalryman, and George E. Pickett, who led the desperate Confederate charge of the Virginia

Division at Gettysburg. It also contains the graves of the eccentric John Randolph of Roanoke; Commodore Maury, the navigator; Henry A. Wise, Governor of Virginia when the State seceded, and Thomas Ritchie, long editor of the *Richmond Enquirer*, a most powerful writer and political leader in the early part of the nineteenth century, who is regarded in Virginia as the "Father of the Democratic Party." There are crowded into this cemetery in one place twelve thousand graves of Confederate soldiers, and in the centre of the ghastly plot there rises a huge stone pyramid, ninety feet high, erected as a memorial by the Southern women. Vines overrunning it almost conceal the rough joints of the stones. No name is upon it, for it was built as a monument for the unnamed dead. On three sides are inscriptions; on one "To the Confederate Dead;" on another "Memoria in Æterna," and on a third "Numini et Patriæ Asto." As they fell on the adjacent battlefields or died in the hospitals, unclaimed, they were brought here and buried in rows. In one urgent, terrible season, time not being given to prepare separate graves, the bodies were interred on the hillside in long trenches. This sombre pyramid and its immediate surroundings are impressive memorials of the great war. From any of the Richmond hills can be seen other grim mementos. Almost all the present city parks were then army hospitals or cemeteries; all the chief highways lead

TUNNEL NEAR GIRARD AVENUE BRIDGE, PHILADELPHIA

out to battlefields, and most of them in the suburbs are bordered with the graves of the dead of both armies. All around the compass the outlook is upon battlefields, and on all sides but the north upon cemeteries.

M'CLELLAN'S SIEGE OF RICHMOND.

The great memory of Richmond for all time will be of the Civil War, when for three years battles raged around it. The first movement against the city was McClellan's siege in 1862, and the environs show abundant remains of the forts, redoubts and long lines of earthworks by which the Confederate Capital was so gallantly defended. The earliest attack was by Union gunboats in May, 1862, against the batteries defending Drewry's Bluff on James River, seven miles below the town, the defensive works being so strong that little impression was made, but enough was learned to prevent any subsequent naval attack there. McClellan came up the Peninsula between James and York Rivers, approached Richmond from the east, and extended his army around to the north, enveloping it upon a line which was the arc of a circle, from seven miles east to five miles north of the city. The Chickahominy flows through a broad and swampy depression in the table-land north and east of Richmond, bordered by meadows, fens and thickets of underbrush. It thus divided McClellan's investing army, and the first

great battle near Richmond was begun by the Confederates, who took advantage of a heavy rain late in May which had swollen the river and swamps. They fell upon the Union left wing on May 31st, and the indecisive battle of Fair Oaks, in which the losses were ten thousand men, was fought southwest of the Chickahominy. General Joseph E. Johnston, the Confederate Commander, was badly wounded, and General Lee succeeded him, continuing in command until the war closed. Extensive cemeteries now mark this battlefield among the swamps. During June the heat and malaria filled McClellan's hospitals with fever cases, and he had to move the greater portion of his army to higher ground north of the Chickahominy, where he erected protective earthworks. These still exist, with the formidable ranges of opposing Confederate works on the south side of the river.

One of the most brilliant Confederate movements of the war followed. McClellan's right wing stretched around to the village of Mechanicsville, five miles north of Richmond, and Lee determined to overwhelm this wing. Stonewall Jackson had been driving the Union troops out of the Shenandoah Valley northwest of Richmond, and late in June began a combined movement with Lee's army at Richmond. Longstreet and Hill crossed the Chickahominy above Mechanicsville and attacked the Union right, beginning the "Seven Days' Battles," lasting from June

25 to July 1, 1862. Jackson was to have got down the same day from the Shenandoah Valley, but his march was delayed, and this gave time for McClellan to withdraw his wing and extensive baggage trains across the swamps below, the stubborn defense by his rear guards making the fierce conflict of Gaines' Mill, on the second day, during which Jackson, coming from the northward and joining the others, compelled the Union lines to change front, the contest thus turning into the first battle of Cold Harbor, in which the rear held their ground until the retreat was completed across the Chickahominy, and withdrew, destroying roads and bridges behind them. McClellan then made a further retreat, for which these obstructive tactics gave time, across the White Oak Swamp down the river, moving on a single road, leading to higher ground, which was held by hasty defenses. The Confederate attacks upon this new line made the battles of Savage Station, Charles City Cross Roads, and Frazier's Farm, the pursuit being checked long enough to permit another retreat and the formation of lines of defense on Malvern Hill, fifteen miles southeast of Richmond, adjoining James River. The Confederates again attacked, but met a disastrous check; and, wearied by a week of battles and marches, they then desisted, closing the seven days' fighting, in which both sides were worn out, and the losses were forty thousand men. McClellan's army, having retreated from around Richmond,

afterwards withdrew farther down James River to Harrison's Landing, and here they rested. Subsequently they were removed by vessels to Washington for the later campaign which resulted in the second battle of Bull Run, McClellan being superseded for a brief period by Pope. This brilliant Confederate movement against McClellan raised the siege and relieved Richmond, emboldening them to make their subsequent aggressive campaigns across the Potomac, which were checked at Antietam and at Gettysburg.

GRANT'S SIEGE OF RICHMOND.

There were no Union attacks directly against Richmond in 1863. The second great movement upon the Confederate Capital began in June, 1864, when Grant came down through the Wilderness, as already described, and attacked the Confederates at Cold Harbor. Lee was entrenched there in almost the same defensive position occupied by McClellan's rear when protecting his retreat across the Chickahominy two years before. Grant made little impression, but in a brief and bloody battle lost fifteen thousand men. He then turned aside from this almost impregnable position to the northeast of Richmond, went south to the James River, and, crossing over, started a new attack from a different quarter. This removed the seat of war to the south of Richmond, and in September, 1864, General Butler's

Unionist troops from Bermuda Hundred captured Fort Harrison, a strong work on the northeast side of the James, opposite Drewry's Bluff, and not far from Malvern Hill. The campaign then became one of stubborn persistence. Throughout the autumn and winter Grant gradually spread his lines westward around Petersburg, so that the later movements were more a siege of that city than of Richmond. City Point, at the mouth of the Appomattox, flowing out from Petersburg to the James, became his base of supplies. As the Union lines were extended steadily westward, one railway after another, leading from the far South up to Petersburg and Richmond, was cut off, and Lee was ultimately starved out, forcing the abandonment of Petersburg in the early spring of 1865, and the evacuation of Richmond on April 3d, with the retreat of Lee westward, and the final surrender at Appomattox six days later, causing the downfall of the Confederacy, and ending the war.

From the top of Libby Hill in Richmond the route is still pointed out by which the swiftly moving Union troops, after that fateful Sunday of the evacuation, advanced over the level lands from Petersburg towards the burning city. The bridges across the James were burnt, and acres of buildings in the business section were in flames when they came to the river bank and found that the greater portion of the affrighted people had fled. The Yankees quickly

laid a pontoon bridge, crossed to Shockoe Hill, rushed up to the Capitol, and raised the Union "Stars and Stripes" on the roof, replacing the Confederate "Stars and Bars." Then they went vigorously to work putting out the fires, and the new infusion of life given the city by its baptism of blood imparted an energy which has not only restored it, but has given it an era of great prosperity. It is a curious fact that the nearest approach any Northern troops made to Richmond during the progress of the war was in March, 1864. A precursor to Grant's march through the Wilderness was a dashing cavalry raid from the northward, the troopers crossing the Chickahominy, then unguarded, and advancing to a point about one mile from the city limits. Here they met some resistance, and, learning of defensive works farther ahead, General Kilpatrick, who commanded the raiders, retreated. General Lee's troops were then fifty miles away from Richmond, guarding the lines along the Rappahannock.

PIEDMONT AND THE SHENANDOAH VALLEY.

In the great strategic movements of the opposing armies of the Civil War they repeatedly traversed a large part of Virginia and Maryland to the northwest of the route between Washington and Richmond. Like the general coastal formation east of the Alleghenies, Virginia rises into successive ridges parallel with the mountains. The first range of low

broken hills stretching southwest from the Potomac are called in different parts the Kittoctin, Bull Run and other mountains extending down to the Carolina boundary. From these, what is known as the Piedmont district stretches all across the State, and has a width of about twenty-five miles to the base of the Blue Ridge, being a succession of picturesque valleys and rolling lands, the general elevation gradually increasing towards the northwest, where it is bordered by the towering Blue Ridge and its many spurs and plateaus, with passages through at various gaps. The Blue Ridge is elevated about fifteen hundred feet at the Potomac, but Mount Marshall, at Front Royal, rises nearly thirty-four hundred feet, and the Peaks of Otter, farther southwest, are much higher. Beyond this is the great Appalachian Valley, which stretches from New England to Alabama, the section here being known as the "Valley of Virginia," and its northern portion as the Shenandoah Valley. This is a belt of rolling country, with many hills and vales, diversified by streams that wind among the hillsides, and having a varying breadth of ten to fifty miles in different parts. Beyond it, to the northwest, are the main Allegheny Mountain ranges. The opposing troops marched and fought over all this country in connection with the greater military movements, and here was the special theatre of Stonewall Jackson's exploits and his wonderful marches and quick manœuvres which made his

troops proudly style themselves his "foot cavalry." The memory of Jackson is cherished by the Southern people more than that of any other of their leaders in the Civil War, and his brilliant exploits and inopportune death have made him their special hero.

In the Piedmont region, to the southeast and in front of the Blue Ridge, are the towns of Leesburg, Manassas, Warrenton, Culpepper, Orange and Charlottesville, all well known in connection with the opposing military movements. Charlottesville, about sixty-five miles northwest of Richmond, in a beautiful situation, was an important Confederate base of supplies. Here are now about six thousand people, and the town has its chief fame as the seat of the University of Virginia and the home of Thomas Jefferson. The University was founded mainly through the exertions of Jefferson, and has some five hundred students. Its buildings are a mile out of town, and the original ones were constructed from Jefferson's designs and under his supervision, the chief being the Rotunda, recently rebuilt, and the modern structures for a Museum of Natural History and an Observatory. Jefferson was proud of this institution, and in the inscription which he prepared for his tomb described himself as the "author of the Declaration of Independence, and of the statute of Virginia for religious freedom, and father of the University of Virginia." Among its most famous

students was Edgar Allan Poe, and a fine bronze bust of him was unveiled at the University in 1899, on the fiftieth anniversary of his death. Thomas Jefferson lived at Monticello, the old house being an interesting specimen of early Virginia architecture, and standing on a hill southeast of the town. Here he died just fifty years after the Declaration was promulgated, July 4, 1826, and he is buried in the family graveyard near the house. Monticello is now celebrated for its native wines.

The Shenandoah Valley during the war was noted for the way in which the opposing forces chased each other up and down, with repeated severe battles. Here was fought, in June, 1862, the battle of Cross Keys, near the forks of the Shenandoah. Jackson had previously retreated up the Valley, but by a series of brilliant movements, begun after the battle of Fair Oaks before Richmond, he was able to meet and defeat in detail the various armies under Banks, Fremont, McDowell and Shields, thus managing to foil or hold in check seventy thousand men, while his own troops were never more than twenty thousand. Then coming southward out of the Valley, he joined in turning McClellan's right wing before Richmond at the end of June, afterwards following up Banks in August, and defeating him at Cedar Mountain, near Culpepper; then joining in the defeat of Pope at the second battle of Bull Run; then capturing Harper's Ferry and eleven thousand men September 15th,

and finally taking part in the battle of Antietam two days later. When Grant began his siege of Richmond after the second battle of Cold Harbor, in 1864, he made General Sheridan commander of the troops in the Shenandoah Valley, and fortune turned. Sheridan opposed Early, and in September and October had a series of brilliant victories, the last one at Cedar Creek, where he turned a rout into a victory by his prompt movements. Sheridan had been in Washington, and came to Winchester, "twenty miles away," where he heard "the terrible grumble and rumble and roar" of the battle, and made his noted ride, the exploit being so conspicuous that he received the thanks of Congress. Early in 1865 he made a cavalry raid from Winchester, in the Valley, down to the westward of Richmond, around Lee's lines, and rejoined the army at Petersburg, having destroyed the James River and Kanawha Canal and cut various important railway connections in the Confederate rear. The Shenandoah Valley to-day is very much in its primitive condition of agriculture, but has been opened up by railway connections which develop its resources, and its great present attraction is the Cave of Luray. This cavern is about five miles from the Blue Ridge, and some distance southwest of Front Royal. It is a compact cavern, well lighted by electricity, and is more completely and profusely decorated with stalactites and stalagmites than any other in the world. Some of the chambers

are very imposing, and all the more important formations have been appropriately named. The scenery of the neighborhood is picturesque, and the cavern has many visitors.

THE BATTLEFIELD OF GETTYSBURG.

In considering the great theatre of the Civil War, attention is naturally directed to the chief contest of all, and the turning-point of the rebellion, the battle of Gettysburg, fought at the beginning of July, 1863. After the victory at Chancellorsville in May the Confederates determined to carry the war northward into the enemy's country. Gettysburg is seven miles north of the southern boundary of Pennsylvania, and over forty miles from the Potomac River. To the westward is the long curving range of the South Mountain, and beyond this the great Appalachian Valley, a continuation of the Shenandoah Valley, crossing Central Pennsylvania in a curve, and here called the Cumberland Valley. In the latter are two prominent towns, Chambersburg in Pennsylvania, and Hagerstown in Maryland, on the Potomac. General Lee, in preparation for the march northward, gathered nearly ninety thousand men at Culpepper in Virginia, including Stuart's cavalry force of ten thousand. General Hooker's Union army, which had withdrawn across the Rappahannock after Chancellorsville, was then encamped opposite Fredericksburg, and one hundred and fifty miles south of

Gettysburg. Lee started northward across the Potomac, but Hooker did not discover it for some days, and then rapidly followed. The Confederates crossed between June 22d and 25th, and concentrated at Hagerstown, in the Cumberland Valley, up which they made a rapid march, overrunning the entire valley to the Susquehanna River, and appearing opposite Harrisburg and Columbia. Hooker, being late in movement, crossed the Potomac lower down than Lee, on June 28th, thus making a northern race, up the curving valleys, with Lee in advance, but on the longer route of the outer circle. There was a garrison of ten thousand men at Harper's Ferry on the Potomac, and Hooker asked that they be added to his army; but the War Department declined, and Hooker immediately resigned, being succeeded by General George G. Meade, who thus on the eve of the battle became the Union commander.

There are two parallel ridges bordering the plain on which Gettysburg stands. The long Seminary Ridge, stretching from north to south about a mile west of the town, gets its name from the Lutheran Theological Seminary standing upon it; and the Cemetery Ridge to the south of the town, which partly stretches up its slopes, has on its northern flat-topped hill the village cemetery, wherein the principal grave then was that of James Gettys, after whom the place was named. There is an outlying eminence called Culp's Hill farther to the east, mak-

ing, with the Cemetery Ridge, a formation bent around much like a fish-hook, with the graveyard at the bend and Culp's Hill at the barb, while far down at the southern end of the long straight shank, as the ridge extends for two miles away, with an intervening rocky gorge called the Devil's Den, there are two peaks, formed of tree-covered crags, known as the Little Round Top and the Big Round Top. These long parallel ridges, with the intervale and the country immediately around them, are the battlefield, which the topographical configuration well displays. It covers about twenty-five square miles, and lies mainly southwest of the town.

It was on June 28th that General Meade unexpectedly assumed command of the Union army, and he was then near the Potomac. General Ewell with the Confederate advance guard had gone up the Cumberland Valley as far as Carlisle, and his troopers were threatening Harrisburg. Nobody had opposed them, and the Confederate main body, which had got much ahead of Hooker, was at Chambersburg. Lee being far from his base, and hearing of the Union pursuit, then determined to face about and cripple his pursuers, fixing upon Gettysburg as the point of concentration. He ordered Ewell to march south from Carlisle, and the other commanders east from Chambersburg through the mountain passes. The Union cavalry advance under General Buford reached Gettysburg on June 30th, ahead of the Confederates,

and Meade's army was then stretched over the ground for more than forty miles back to the Potomac, all coming forward by forced marches. As soon as Meade became aware of Lee's changed tactics he concluded that this extended formation was too risky, and decided to concentrate in a strong position upon the Pipe Creek hills in Maryland, about fifteen miles south of Gettysburg, and issued the necessary orders. Thus the battle opened, with each army executing a movement for concentration.

THE GREAT BATTLE.

The battle began on July 1st, the Union Cavalry, which had gone out to the west and north of Gettysburg, becoming engaged with the Confederate advance approaching the town from the passes through the South Mountain. The cavalry, at first victorious, was soon overwhelmed by superior numbers, and infantry supports arrived, under General Reynolds; but he was killed, and they were all driven back and through Gettysburg to the cemetery and Culp's Hill, which were manned by fresh troops that had come up. Meade was then at Pipe Creek, laying out a defensive line, but when he heard of Reynolds' death and the defeat, he sent General Hancock forward to take command, who decided that the Cemetery Ridge was the place to give battle. Ewell had in the meantime extended the Confederate left wing around to the east of Culp's Hill and held

Gettysburg, but active operations were suspended, and the night was availed of by both sides to get their forces up and into position, which was mainly accomplished by morning.

When the second day, July 2d, opened, the armies confronted each other in line of battle. The Union troops were along the Cemetery Ridge and the Confederates upon the Seminary Ridge, across the intervale to the west, their lines also stretching around through Gettysburg to the north of the cemetery, and two miles east along the base of Culp's Hill. In the long intervening valley, and in the ravines and upon the slopes of the Cemetery Ridge and Culp's Hill, the main battle was fought. The attack began by General Longstreet advancing against the two Round Tops, but after a bloody contest he was repulsed. General Sickles, who held the line to the south of the Little Round Top, then thought he could improve his position by advancing a half-mile into the valley towards the Seminary Ridge, thus making a broken Union line, with a portion dangerously thrust forward. The enemy soon took advantage of this, and fell upon Sickles, front and flank, almost overwhelming his line in the "Peach Orchard," and driving it back to the adjacent "Wheat Field." Reinforcements were quickly poured in, and there was a hot conflict, Sickles being seriously wounded and his troops almost cut to pieces. About the same time Ewell made a terrific charge out of Gettysburg

upon the Cemetery and Culp's Hill, with the "Louisiana Tigers" and other troops, effecting a lodgement, although the defending soldiers wrought great havoc by a heavy cannonade. The Union gunners on Little Round Top ultimately cleared the "Wheat Field," and then the combatants rested. Lee was much inspirited by his successes, and determined to renew the attack next morning.

Upon the third and last day, July 3d, General Meade opened the combat early in the morning by driving out Ewell's forces, who had effected a lodgement on Culp's Hill. General Lee did not learn of this, but he was full of the idea that both the Union centre and right wing had been weakened the previous day, and during the night he planned an attack in front, to be accompanied by a cavalry movement around the Union right to assail the rear, thus following up Ewell's supposed advantage. To give Stuart with the cavalry time to get around to the rear, the front attack was not made until afternoon. During the morning each side got cannon into position, Lee having one hundred and twenty guns along Seminary Ridge, and Meade eighty in the Cemetery and southward, along a low, irregular stone pile, forming a sort of rude wall bordering the road leading from Gettysburg south to Taneytown, in Maryland. The action began about one o'clock in the afternoon, when the Confederates opened fire, and the most terrific artillery duel of the war took place

across the intervening valley, six guns being discharged every second. The troops suffered little, as they kept down in the ground, but several Union guns were dismounted. After two hours deafening cannonade Lee ordered his grand attack, the celebrated charge by General Pickett, a force of fourteen thousand men with brigade front advancing across the valley. They marched swiftly, and had a mile to go, but before they were half-way across all the available Union guns had been trained upon them. Their attack was directed at an umbrella-shaped clump of trees on the Cemetery Ridge at a low place where the rude stone wall made an angle, with its point outside. General Hancock commanded this portion of the Union line. The grape and canister of the Union cannonade ploughed furrows through Pickett's ranks, and when his column got within three hundred yards, Hancock opened musketry fire with terrible effect. Thousands fell, and the brigades broke in disorder; but the advance, headed by General Armistead on foot, continued, and about one hundred and fifty men leaped over the stone piles at the angle to capture the Union guns. Lieutenant Cushing, mortally wounded in both thighs, ran his last serviceable gun towards the wall, and shouting to his commander, "Webb, I will give them one more shot!" he fired the gun and died. Armistead put his hand on the cannon, waved his sword, and called out, "Give them the cold steel, boys!" then, pierced

by bullets, he fell dead alongside of Cushing. Both lay near the clump of trees, about thirty yards inside the wall, their corpses marking the farthest point to which Pickett's advance penetrated. There was a hand to hand conflict; Webb was wounded, and also Hancock, and the slaughter was dreadful. The Confederates were overwhelmed, and not one-fourth of the gallant charging column, composed of the flower of the Virginia troops, escaped, the remnant retreating in disorder. Stuart's cavalry failed to coöperate as intended, having met the Union cavalry about four miles to the east of Gettysburg, and the conflict ensuing prevented their attacking the Union rear. After Pickett's retreat there was a general Union advance, closing the combat.

The point within the angle of the stone wall where Cushing and Armistead fell has been commemorated by what is known as the "High-Water Mark Monument," for it was placed at the point reached by the top of the flood-tide of the rebellion, as afterwards there was a steady ebb. During the night of July 3d Lee began a retreat, and aided by heavy rains, usually following great battles, the Confederates next day withdrew through the mountain passes towards Hagerstown, and afterwards escaped across the Potomac. Upon the day of Lee's retreat, Vicksburg surrendered to General Grant, and these two events began the Confederacy's downfall. There were engaged in the battle of Gettysburg about eighty thou-

sand men on each side, the Union army having three hundred and thirty-nine cannon and the Confederates two hundred and ninety-three. It was the largest battle of the Civil War in the actual numbers engaged, and one of the most hotly contested. The Union loss was twenty-three thousand and three killed, wounded and prisoners, and the Confederate loss twenty-three thousand seven hundred and sixty-eight.

THE GETTYSBURG MONUMENTS.

The battlefield of Gettysburg is better marked, both topographically and by monuments, than probably any other battlefield in the world. Over a million dollars have been expended on the grounds and monuments. The "Gettysburg Battlefield Memorial Association," representing the soldiers engaged, has marked all the important points, and the tracts along the lines, over four hundred and fifty acres, have been acquired, so as to thoroughly preserve all the landmarks where the most important movements were executed. There are some five hundred monuments upon the field, placed with the utmost care in the exact localities, and standing in woods or on open ground, by the roadsides, on stony heights and ridges in gardens, and of all designs, executed in bronze, marble, granite, on boulders and otherwise. Marking-posts also designate the positions of the various organizations in the opposing armies. To the north and west of Gettysburg is the scene of the first day's

contest, but the more interesting part is to the southward. Ascending the Cemetery Hill, there is passed, by the roadside, the house of Jenny Wade, the only woman killed in the battle, accidentally shot while baking bread. The rounded Cemetery Hill is an elevated and strong position having many monuments, and here, alongside the little village graveyard, the Government established a National Cemetery of seventeen acres, where thirty-five hundred and seventy-two soldiers are buried, over a thousand being the unknown dead. A magnificent battle monument is here erected, surmounted by a statue of Liberty, and at the base of the shaft having figures of War, History, Peace and Plenty. This charming spot was the centre of the Union line, then a rough, rocky hill. The cemetery was dedicated in November, 1863, Edward Everett delivering the oration, and the monument on July 1, 1869. At the cemetery dedication President Lincoln made the famous "twenty-line address" which is regarded as the most immortal utterance of the martyr President, and has become an American classic. The British *Westminster Review* described it as an oration having but one equal, in that pronounced upon those who fell during the first year of the Peloponnesian War, and as being its superior, because "natural, fuller of feeling, more touching and pathetic, and we know with an absolute certainty that it was really delivered." The President was requested to say a few

words by way of dedication, and drawing from his pocket a crumpled piece of paper on which he had written some notes, he spoke as follows:

"Fourscore and seven years ago our fathers brought forth upon this continent a new Nation, conceived in liberty and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation or any nation, so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We are met to dedicate a portion of it as the final resting-place of those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it far above our power to add or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated here to the unfinished work that they have thus far so nobly carried on. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to the cause for which they here gave the last full measure of devotion—that we here highly resolve that the dead shall not have died in vain—that the nation shall, under God, have a new birth of freedom, and that

government of the people, by the people, for the people, shall not perish from the earth."

A mile across the valley the Lutheran Seminary is seen, the most conspicuous landmark of the Confederate line. To the southeast from the cemetery is Culp's Hill, strewn with rocks and boulders and covered with trees. The Emmettsburg road goes southward down the valley, gradually diverging from the Union line, and crossing the fields that were the battleground on the second and third days. It is bordered by numerous monuments, some of great merit, and leads to the "Peach Orchard," where the line bends sharply back. Peach trees are replanted here as the old ones fall. The "Wheat Field" is alongside, now grass-grown. Beyond it the surface goes down among the crags and broken stones of the "Devil's Den," a ravine through which flows a stream, coming from the orchard and wheat field, and separating them from the rocky "Round Tops," the sandstone cliffs of the "Little Round Top" rising high above the ravine. The fields sloping to the stream above the Den are known as the "Valley of Death." Among these rocks there are many monuments, made of the boulders that are so numerous. A toilsome path mounts the "Big Round Top" beyond, and an Observatory on the summit gives a good view over almost the entire battlefield. This summit, more than three miles south of Gettysburg, has tall timber, preserved as it was in the battle.

There are cannon surmounting the "Round Tops," representing the batteries in action. Across the valley to the west is the long fringe of timber that masked the Confederate position on Seminary Ridge. A picnic-ground, with access by railway, is located alongside the "Round Tops." The lines of breastworks are maintained, and upon the lower ground, not far away, are preserved the rough stone walls, and to the northward is the little umbrella-shaped grove of trees at which Pickett's charge was directed. The Twentieth Massachusetts regiment brought here a huge conglomerate boulder from New England and set it up as their monument, their Colonel, Paul Revere, being killed in the battle.

There was no fighting along the Confederate line on Seminary Ridge until the scene of the first day's conflict is reached, to the northwest of Gettysburg. Here is marked where General Reynolds fell, just within a grove of trees, and a fine equestrian statue of him has been erected on the field. From his untimely death, Reynolds is regarded as the special Union hero of the battle, as Armistead was the Southern. Nearby a spirited statue, the "Massachusetts Color-Bearer," holds aloft the flag of the Thirteenth Massachusetts regiment, standing upon a slope, thus marking the spot where he fell at the opening of the conflict. Such is the broad and impressive scene of one of the leading battles of the world, and the greatest ever fought in America. But happily

the passions which caused it have been stilled, and the combatants are now again united in their patriotic devotion to a common country. As Longfellow solemnly sounds his invocation in the *Building of the Ship*, so now do all the people in the reunited Union:

"Thus too, sail on, O Ship of State!
Sail on, O Union, strong and great!
Humanity with all its fears,
With all the hopes of future years,
Is hanging breathless on thy fate!"

THE VALLEY OF THE DELAWARE.

III.

THE VALLEY OF THE DELAWARE.

Delaware Bay—Cape May—Cape Henlopen—Delaware Breakwater—Maurice River Cove—The Pea Patch—Newcastle—Mason and Dixon's Line—Fort Christina—Wilmington—The Duponts—Brandywine—William Penn—West Jersey—Pennsylvania—Upland—The Ship "Welcome"—Philadelphia Shackamaxon—The Lenni Lenapes—The City Hall—Independence Hall—Benjamin Franklin—Betsy Ross and the American Flag—Stephen Girard—Girard College—Notable Charities and Buildings—Christ Church—Old Swedes' Church—Longfellow's Evangeline—Cathedral of St. Peter and St. Paul—University of Pennsylvania—City of Homes—John Bartram and his Garden—Fairmount Park—Laurel Hill—Wissahickon Creek—Germantown—Johannes Kelpius—The Schuylkill River—Tom Moore—Pennsylvania Dutch—Valley Forge—Reading—Port Clinton—Pottsville—Anthracite Coal-fields—New Jersey Coast Resorts—Atlantic City—Ocean Grove—Asbury Park—Long Branch—St. Tammany—Poquessing—Rancocas—The Neshaminy—The Log College—Bristol—Burlington—Pennsbury Manor—Bordentown—Admiral Stewart—Joseph Bonaparte—Camden and Amboy Railroad—Delaware and Raritan Canal—Trenton Gravel—Trenton, its Potteries, Crackers and Battle—The Swamp Angel—Morrisville—General Moreau—Princeton and its Battle—General Mercer—Princeton University—Jonathan Edwards—Marshall's Walk—Pennsylvania Palisades—Forks of the Delaware—Easton—Lafayette College—Ario Pardee—Phillipsburg—Morris Canal—Lake Hopatcong—Lehigh River—Bethlehem—Lehigh University—The Moravians—Count Zinzendorf—Teedyuscung—Allentown—Lehigh Gap—Mauch Chunk—Asa Packer—Coal Mining—Summit Hill—The

Switchback — Nescopec Mountain — Wyoming Valley — Wilkesbarre—Harvey's Lake—Scranton—Wyoming Massacre —The Foul Rift—The Terminal Moraine—The Great Glacier—Belvidere—Delaware Water Gap—The Wind Gap—Minsi and Tammany—The Minisink—The Buried Valleys—Nicholas Depui — George La Bar — Stroudsburg — Pocono Knob—Bushkill—Walpack Bend—Pike County—Dingman's Choice—Waterfalls—Milford—Tom Quick, the Indian Killer —Tri-States Corner—Neversink River—Port Jervis—Delaware and Hudson Canal—High Point—The Catskill Flags—Hawk's Nest—Shohola—The Lackawaxen and its Battle—The Sylvania Society—Horace Greeley—Blooming Grove—Pocono High Knob—Hawley—The Wallenpaupack—The Indian Orchard—Honesdale—Washington Irving—The Gravity Railroad—Carbondale—Mast Hope—Narrowsburg—Cochecton — Hancock — Delaware Headwaters—Popacton River—Mohock River—Deposit—Oquaga Creek and Lake—Lake Utsyanthia—Ote-se-on-teo, Source of the Delaware.

DELAWARE BAY.

THE famous navigator of the Dutch East India Company, Hendrick Hudson, was the first white man who entered Delaware Bay. He discovered it on August 28, 1609, two weeks before he entered Sandy Hook Bay and found the Hudson River. When Thomas West, Lord De La Warr, Governor of Virginia, was driven by stress of weather into the bay in 1611, his name was given the river. In 1614 another redoubtable old skipper of the Dutch East India Company, Captain Carolis Jacobsen Mey, searching, like all the rest of the navigators of those days, for the northwest passage to Asia and the Indies, came along there with a small fleet of sixty-ton

frigates, and tried to give the river and its capes his names; but only one of these has survived, Cape May. The southern portal at the entrance, which he wished to make Cape Carolis, was named a few years afterwards, by the Swedes, Cape Henlopen. The Indians called the river "Lenape-wihituck," or the "river of the Lenapes," meaning "the original people," or, as sometimes translated, the "manly men," the name of the aboriginal confederation that dwelt upon its banks. It had various other names, for when the Swedes came, the Indians about the bay called it "Pantoxet." In an early deed to William Penn it is called "Mackeriskickon," and in another document the "Zunikoway." Some of the tribes up the river named it "Kithanue," meaning the "main stem," as distinguished from its tributaries, and those on the upper waters called it the "Lemasepose," or the "Fish River," for the Upper Delaware was then a famous salmon stream, and its early Dutch explorers thus came to calling it the "Fish River" also. The Delaware, from its source in the Catskills to the sea, is about three hundred and sixty miles in length.

The estuary of Delaware Bay is about sixty miles long and thirty miles broad in the widest part, contracting towards the north to less than five miles. The capes at the entrance are about fifteen miles apart. As a protection to shipping, the Government began, on the Cape Henlopen side, in 1829, the

construction of the famous Delaware Breakwater. It consists of a stone breakwater about twenty-six hundred feet long facing the northeast, and an ice-breaker about fourteen hundred feet long, at right angles, facing the upper bay. These were completed in 1870, there being an opening between them of about sixteen hundred feet width, which was afterwards filled up. The surface protected covers three hundred and sixty acres, and the whole work cost about $3,500,000. It was estimated in 1871 that fully twenty thousand vessels every year availed of the protection of this breakwater, the depth of water being twenty-four feet behind it—sufficient for most of the shipping of that day. But as vessels have become larger and of deeper draft, they have not been able to use it, and the Government has recently begun the construction of another and larger breakwater for a harbor of refuge in deeper water adjoining the regular ship channel, some distance to the northward. Delaware Bay divides the States of Delaware and New Jersey. The first settlement in Delaware was made by the Dutch near Lewes in 1630, but the Indians destroyed the colony; and in 1638 a colony of Swedes and Finns came out under the auspices of the Swedish West India Company, landed and named Cape Henlopen, and purchased from the Indians all the land from there up to the falls at Trenton, finally locating their fort near the mouth of Christiana Creek, and naming the country

Nya Sveriga, or New Sweden. The Swedes and Dutch quarrelled about their respective rights until New York was taken by the English in 1664, after which England controlled. The first settlement in New Jersey was made by Captains Mey and Jorisz in 1623, who built the Dutch Fort Nassau a short distance below Philadelphia; but it did not last.

Delaware Bay is an expansive inland sea, subject to fierce storms, and broadening on its eastern side into Maurice River Cove, noted for its oysters. A deep ship channel conducts commerce through the centre of the bay, marked by lighthouses built out on mid-bay shoals, and, as the shores approach, by range lights on the banks, the Delaware Bay and River being regarded as the best marked and lighted stream in the country. Up at the head of the bay, years ago, a ship loaded with peas and beans sank, and this in time made at first a shoal, and afterwards an island, since known as the "Pea Patch." Here and on the adjacent shores the Government has lately erected formidable forts, which make, with their torpedo stations in the channel, a complete system of defensive works in the Delaware, first put into active occupation during the Spanish War of 1898, as a protection against a hostile fleet entering the river. Over in the "Diamond State" of Delaware, near here, on the river shore, is the aged town of Newcastle, quiet and yet attractive, having in operation, and evidently to the popular satisfaction, the whipping-post and

stocks, a method of punishment which is a terror to all evil-doers, and is said to be most successful in preventing crime, as thieves and marauders give Newcastle a wide berth. This was originally a Swedish settlement, the standard of the great Gustavus Adolphus being unfurled there in 1640, when it was called Sandhuken, or Sandy Hook, it being a point of land jutting out between two little creeks. The Dutch soon captured it, changing the name to New Amstel; and about 1670 the settlement, then containing nearly a hundred houses, became New Castle, under English auspices. The northern boundary of the State of Delaware, dividing it from Pennsylvania, is an arc of a circle, made by a radius of twelve miles described around the old Court House at Newcastle, which still has in its tower the bell presented by Queen Anne.

MASON AND DIXON'S LINE.

In coming over by railroad from the Chesapeake to the Delaware, the train, after crossing the broad Susquehanna and the head of Elk, and rounding in Maryland the Northeast Arm of Chesapeake Bay, soon enters the State of Delaware near the northeastern corner of the former State. This corner is at the termination of the crescent-shaped northern boundary of Delaware. The northern boundary of Maryland here beginning and laid down due west, to separate it from Pennsylvania, is the famous "Mason

and Dixon's Line," surveyed by Charles Mason and Jeremiah Dixon, two noted English mathematicians and astronomers in the eighteenth century. This boundary gained great notoriety because it so long marked the northern limit of slavery in the United States. For almost a century there were conflicts about their respective limits between the rival proprietaries of the two States, producing sometimes riot and bloodshed, until, in 1763, these men were brought over from England, and in December began laying out the line on the parallel of latitude 39° 43′ 26.3″ North. They were at the work several years, surveying the line two hundred and forty-four miles west from the Delaware River, and within thirty-six miles of the entire distance to be run, when the French and Indian troubles began, and they were attacked and driven off, returning to Philadelphia in December, 1767. At the end of every fifth mile a stone was planted, graven with the arms of the Penn family on one side and of Lord Baltimore on the other. The intermediate miles were marked by smaller stones, having a P on one side and an M on the other, all the stones thus used for monuments being sent out from England. After the Revolution, in 1782, the remainder of the line was laid down, and in 1849 the original surveys were revised and found substantially correct.

When the little colony of Swedes and Finns under Peter Minuet came into Christiana Creek in April,

1638, and established their fort, they began the first permanent settlement in the valley of the Delaware. It was built upon a small rocky promontory, and they named it Christina, in honor of the daughter of Gustavus Adolphus. The Dutch afterwards captured it and called it Fort Altena; but the town retained part of the original name in Christinaham, and the creek also retained the name, the English taking possession in 1664. The Swedes, however, regardless of the flag that might wave over them, still remained; and their old stone church, built in 1698, still stands, down near the promontory by the waterside, in a yard filled with time-worn gravestones. This old Swedes' Church of the Holy Trinity, the oldest now on the Delaware, was dedicated on Trinity Sunday, 1699, and Rev. Ericus Tobias Biorck came out from Sweden to take charge as rector. It was sixty by thirty feet and twenty feet high, and a little bell tower was afterwards added. The ancient church was recently thoroughly restored to its original condition, with brick floor, oaken benches, and stout rafters supporting the roof. This interesting church building is in a factory district which is now part of Wilmington, the chief city of Delaware, a busy manufacturing community of sixty-five thousand people, built on the Christiana and Brandywine Creeks, which unite about a mile from the Delaware. This active city was laid out above the old settlement, in 1731, by William Shipley, who came from Leicestershire,

England. Ships, railway cars and gunpowder are the chief manufactures of Wilmington. The Brandywine Creek, in a distance of four miles, terminating in the city, falls one hundred and twenty feet, providing a great water power. Up this stream are the extensive Dupont powder-mills, among the largest in the world, founded by the French statesman and economist, Pierre Samuel Du Pont De Nemours, who, after the vicissitudes of the French Revolution, migrated with his family to the United States in 1799, and was received with distinguished consideration. He afterwards was instrumental in securing the treaty of 1803 by which France ceded Louisiana, and was in the service of Napoleon, but finally returned to America, where his sons were conducting the powder-works, and he died near Wilmington in 1817. Admiral Samuel Francis Dupont, of the American Navy, was his grandson. Farther up the Brandywine Creek, at Chadd's Ford and vicinity, was fought, in September, 1777, the battle of the Brandywine, where the English victory enabled them to subsequently take possession of Philadelphia.

WILLIAM PENN.

Above Wilmington, the Delaware River is a noble tidal stream of about a mile wide, flowing between gently sloping shores, and carrying an extensive commerce. The great river soon brings us to the famous Quaker settlements of Pennsylvania. Wil-

liam Penn, who had become a member of the Society of Friends, was bequeathed by his father, Admiral Sir William Penn, an estate of £1500 a year and large claims against the British Government. Fenwick and Byllinge, both Quakers, who had proprietary rights in New Jersey, disputed in 1674, and submitted their difference to Penn's arbitration. He decided in favor of Byllinge, who subsequently became embarrassed, and made over his property to Penn and two creditors as trustees. This seems to have turned Penn's attention to America as a place of settlement for the persecuted Quakers, and he engaged with zeal in the work of colonization, and in 1681 obtained from the king, for himself and heirs, in payment of a debt of £16,000 due his father, a patent for the territory now forming Pennsylvania, on the fealty of the annual payment of two beaver skins. He wanted to call his territory New Wales, as many of the colonists came from there, and afterwards suggested Sylvania as specially applicable to a land covered with forests; but the king ordered the name Pennsylvania inserted in the grant, in honor, as he said, of his late friend the Admiral. In February, 1682, Penn, with eleven others, purchased West Jersey, already colonized to some extent. Tradition says that some of these West Jersey colonists sent Penn a sod in which was planted a green twig, to show that he owned the land and all that grew upon it. Next they presented him with a dish

full of water, because he was master of the seas and rivers; and then they gave him the keys, to show he was in command and had all the power.

When William Penn was granted his province, he wrote that "after many waitings, watchings, solicitings and disputes in council, this day my country was confirmed to me under the great seal of England." He had great hopes for its future, for he subsequently wrote: "God will bless and make it the seed of a nation; I shall have a tender care of the government that it will be well laid at first." Some of the Swedes from Christina had come up the river in 1643 and settled at the mouth of Chester Creek, at a place called Upland. The site was an eligible one, and the first parties of Quakers, coming out in three ships, settled there, living in caves which they dug in the river bank, these caves remaining for many years after they had built houses. Penn drew up a liberal scheme of government and laws for his colony, in which he is said to have had the aid of Henry, the brother of Algernon Sidney, and of Sir William Jones. He was not satisfied with Upland, however, as his permanent place of settlement, but directed that another site be chosen higher up the Delaware, at some point where "it is most navigable, high, dry and healthy; that is, where most ships can best ride, of deepest draught of water, if possible, to load or unload, at the bank or key-side, without boating or lightening of it." This site being selected between

the Delaware and Schuylkill Rivers, and the city laid out, Penn, with about a hundred companions, mostly Welsh Quakers, in September, 1682, embarked for the Delaware on the ship "Welcome," arriving at Upland after a six weeks' voyage, and then going up to his city site, which he named Philadelphia, the "City of Brotherly Love."

The first explorers of the Delaware River found located upon the site of Philadelphia the Indian settlement of Coquanock, or "the grove of long pine trees," a sort of capital city for the Lenni Lenapes. Their great chief was Tamanend, and the primeval forest, largely composed of noble pine trees, then covered all the shores of the river. The ship "Shield," from England, with Quaker colonists for Burlington, in West Jersey, higher up the river, sailed past Coquanock in 1679, and a note was made that "part of the tackling struck the trees, whereupon some on board remarked that 'it was a fine spot for a town.'" When Penn sent out his advance agent and Deputy Governor, Captain William Markham, of the British army, in his scarlet uniform, to lay out the plan of his projected city, he wrote him to "be tender of offending the Indians," and gave instructions that the houses should have open grounds around them, as he wished the new settlement to be "a green country town," and at the same time to be healthy, and free from the danger of extensive conflagrations. Penn bought the land farther down the Delaware from the

Swedes, who had originally bought it from the Indians, and the site for his city he bought from the Indians direct. They called him Mignon, and the Iroquois, who subsequently made treaties with him, called him Onas, both words signifying a quill pen, as they recognized the meaning of his name. Out on the Delaware, in what is now the Kensington shipbuilding district, is the "neutral land of Shackamaxon." This words means, in the Indian dialect, the "place of eels." Here, for centuries before Penn's arrival, the Indian tribes from all the region east of the Alleghenies, between the Great Lakes, the Hudson River and the Potomac, had been accustomed to kindle their council fires, smoke the pipe of deliberation, exchange the wampum belts of explanation and treaty, and make bargains. Some came by long trails hundreds of miles overland through the woods, and some in their birch canoes by water and portage. It was on this "neutral ground" by the riverside that Penn, soon after his arrival, held his solemn council with the Indians, sealing mutual faith and securing their lifelong friendship for his infant colony. This treaty, embalmed in history and on canvas, was probably made in November, 1682, under the "Treaty Elm" at Shackamaxon, which was blown down in 1810, the place where it stood by the river being now preserved as a park. Its location is marked by a monument bearing the significant inscription: "Treaty Ground of William

Penn and the Indian Nation, 1682—Unbroken Faith." Thus began Penn's City of Brotherly Love, based on a compact which, in the words of Voltaire, was "never sworn to and never broken." It is no wonder that Penn, after he had seen his city site, and had made his treaty, was so abundantly pleased that he wrote:

"As to outward things, we are satisfied, the land good, the air clear and sweet, the springs plentiful, and provision good and easy to come at, an innumerable quantity of wild fowl and fish; in fine, here is what an Abraham, Isaac and Jacob would be well contented with, and service enough for God, for the fields here are white for harvest. O, how sweet is the quiet of these parts, freed from the anxious and troublesome solicitations, harries and perplexities of woeful Europe."

The Lenni Lenapes, it is stated, told Penn and his people that they often spoke of themselves as the Wapanachki, or the "men of the morning," in allusion to their supposed origin in the lands to the eastward, towards the rising sun. Their tradition was that at the time America was discovered, their nation lived on the island of New York. They called it Manahatouh, "the place where timber is got for bows and arrows." At the lower end of the island was a grove of hickory trees of peculiar strength and toughness. This timber was highly esteemed for constructing bows, arrows, war-clubs, etc. When

they migrated westward they divided into two bands. One, going to the upper Delaware, among the mountains, was termed Minsi, or "the great stone;" and the other band, seeking the bay and lower river, was called Wenawmien, or "down the river." These Indians originated the name of the Allegheny Mountains, which they called the Allickewany, the word meaning "He leaves us and may never return"—it is supposed in reference to departing hunters or warriors who went into the mountain passes.

THE QUAKER CITY.

The great city thus founded by William Penn is built chiefly upon a broad plain between the Delaware and Schuylkill Rivers, about one hundred miles from the sea, and upon the undulating surface to the north and west. The shape of the city is much like an hour-glass, between the rivers, although it spreads far west of the Schuylkill. The Delaware River, in front of the built-up portion, sweeps around a grand curve from northeast to south, and then, reversing the movement, flows around the Horseshoe Bend below the city, from south to west, to meet the Schuylkill. The railway and commercial facilities, the proximity to the coal-fields, and the ample room to spread in all directions, added to the cheapness of living, have made Philadelphia the greatest manufacturing city in the world, and attracted to it 1,300,000 inhabitants. The alluvial character of the shores of

the two rivers surrounds the city with a region of the richest market gardens, and the adjoining counties are a wealthy agricultural and dairy section. Clay, underlying a large part of the surface, has furnished the bricks to build much of the town. Most of the people own their homes; there are over two hundred and fifty thousand dwellings and a thousand miles of paved streets, and new houses are put up by the thousands every year as additional territory is absorbed. When Penn laid out his town-plan, he made two broad highways pointing towards the cardinal points of the compass and crossing at right angles in the centre, where he located a public square of ten acres. The east and west street, one hundred feet wide, he placed at the narrowest part of the hour-glass, where the rivers approached within two miles of each other. This he called the High Street, but the public persisted in calling it Market Street. The north and south street, laid out in the centre of the plat, at its southern end reached the Delaware near the confluence with the Schuylkill. This street is one hundred and thirteen feet wide, Broad Street, a magnificent thoroughfare stretching for miles and bordered with handsome buildings. Upon the Centre Square was built a Quaker meeting-house, the Friends, while yet occupying the caves on the bluff banks of the Delaware that were their earliest dwellings, showing anxiety to maintain their forms of religious worship. This meeting-house has since mul-

tiplied into scores in the city and adjacent districts; for the sect, while not increasing in numbers, holds its own in wealth and importance, and has great influence in modern Philadelphia. Afterwards the Centre Square was used for the city water-works, and finally it was made the site of the City Hall.

The bronze statue of the founder, surmounting the City Hall tower at five hundred and fifty feet elevation, clad in broad-brimmed hat and Quaker garb, carrying the city charter, and gazing intently northeastward towards the "neutral land of Shackamaxon," is the prominent landmark for many miles around Philadelphia. A blaze of electric light illuminates it at night. This City Hall, the largest edifice in America, and almost as large as St. Peter's Church in Rome, has fourteen acres of floor space and seven hundred and fifty rooms, and cost $27,000,000. It is a quadrangle, built around a central court about two hundred feet square, and measures four hundred and eighty-six by four hundred and seventy feet. The lower portion is of granite, and the upper white marble surmounted by Louvre domes and Mansard roofs. This great building is the official centre of Philadelphia, but the centre of population is now far to the northwest, the city having spread in that direction. The City Hall, excepting its tower, is also being dwarfed by the many enormous and tall store and office buildings which have recently been constructed on Broad and other streets near it. Closely adjacent

are the two vast stations of the railways leading into Philadelphia, the Broad Street Station of the Pennsylvania system, and the Reading Terminal Station, which serves the Reading, Baltimore and Ohio and Lehigh Valley systems. Also adjoining, to the northward, is the Masonic Temple, the finest Masonic edifice in existence, a pure Norman structure of granite two hundred and fifty by one hundred and fifty feet, with a tower two hundred and thirty feet high, and a magnificent carved and decorated granite Norman porch, which is much admired.

The great founder not only started his City of Brotherly Love upon principles of the strictest rectitude, but he was thoroughly rectangular in his ideas. He laid out all the streets on his plan parallel to the two prominent ones, so that they crossed at right angles, and his map was like a chess-board. In the newer sections this plan has been generally followed, although a few country roads in the outer districts, laid upon diagonal lines, have been converted into streets in the city's growth. Penn's original city also included four other squares near the outer corners of his plan, each of about seven acres, and three of them were long used as cemeteries. These are now attractive breathing-places for the crowded city, being named after Washington and Franklin, Logan and Rittenhouse. The east and west streets Penn named after trees and plants, while the north and south streets were numbered. The chief street of the city

is Chestnut Street, a narrow highway of fifty feet width, parallel to and south of Market Street. Its western end, like Walnut Street, the next one south, is a fashionable residential section, both being prolonged far west of the Schuylkill River. In the neighborhood of Broad Street, and for several blocks eastward, Chestnut Street has the chief stores. Its eastern blocks are filled largely with financial institutions and great business edifices, some of them elaborate structures.

INDEPENDENCE HALL.

Upon the south side of Chestnut Street, occupying the block between Fifth and Sixth Streets, is Independence Square, an open space of about four acres, tastefully laid out in flowers and lawns, with spacious and well-shaded walks. Upon the northern side of the square, and fronting Chestnut Street, is the most hallowed building of American patriotic memories, Independence Hall, a modest brick structure, yet the most interesting object Philadelphia contains. It was in this Hall, known familiarly as the "State-house," that the Continental Congress governing the thirteen revolted colonies met during the American Revolution, excepting when driven out upon the British capture, after the battle of the Brandywine. The Declaration of Independence was adopted here July 4, 1776. The old brick building, two stories high, plainly built, and lighted by large windows, was begun

in 1732, taking three years to construct, having cost what was a large sum in those days, £5600, the population then being about ten thousand. It was the Government House of Penn's Province of Pennsylvania. There has recently been a complete restoration, by which it has been put back into the actual condition at the time Independence was declared. In the central corridor stands the "Independence bell," the most sacred relic in the city. This Liberty bell, originally cast in England, hung in the steeple, and rang out in joyous peals the news of the signing of the Declaration. Running around its top is the significant inscription: "Proclaim Liberty throughout the Land unto all the Inhabitants Thereof." This bell was cracked while being rung on one of the anniversaries about sixty years ago. In the upper story of the Hall, Washington delivered his "Farewell Address" in closing his term of office as President. The eastern room of the lower story is where the Revolutionary Congress met, and it is preserved as then, the old tables, chairs and other furniture having been gathered together, and portraits of the Signers of the Declaration hang on the walls. The old floor, being worn out, was replaced with tiles, but otherwise the room, which is about forty feet square, is as nearly as possible in its original condition. Here are kept the famous "Rattlesnake flags," with the motto "Don't Tread on Me," that were the earliest flags of America, preceding the Stars and

Stripes. Of the deliberations of the Congress which met in this building, William Pitt wrote: "I must declare that in all my reading and observation, for solidity of reasoning, force of sagacity, and wisdom of conclusion, under such a complication of difficult circumstances, no body of men could stand before the National Congress of Philadelphia." In this building is Penn's Charter of Philadelphia, granted in 1701, and West's noted painting of "Penn's Treaty with the Indians." There are also portraits of all the British kings and queens from Penn's time, including a full-length portrait of King George III., representing him, when a young man, in his coronation robes, and painted by Allan Ramsay.

Other historic places are nearby. To the westward is Congress Hall, where the Congress of the United States held its sessions prior to removal to Washington City. To the eastward is the old City Hall, where the United States Supreme Court sat in the eighteenth century. Adjoining is the Hall of the American Philosophical Society, founded by Benjamin Franklin, and an outgrowth of his Junto Club of 1743. It has a fine library and many interesting relics. Franklin, who was the leading Philadelphian of the Revolutionary period, came to the city from Boston when eighteen years old, and died in 1790. His grave is not far away, in the old Quaker burying-ground on North Fifth Street. A fine bronze statue of Franklin adorns the plaza in front of the Post-

office building on Chestnut Street. Farther down Chestnut Street is the Hall of the Carpenters' Company, standing back from the street, where the first Colonial Congress met in 1774, paving the way for the Revolution. An inscription appropriately reads that "Within these walls, Henry, Hancock and Adams inspired the delegates of the colonies with nerve and sinew for the toils of war." On Arch Street, east from Franklin's grave, is the house where Betsy Ross made the first American flag, with thirteen stars and thirteen stripes, from a design prepared by a Committee of Congress and General Washington in 1777. In this committee were Robert Morris and Colonel George Ross, the latter being the young woman's uncle. It appears that she was expert at needlework and an adept in making the handsome ruffled bosoms and cuffs worn in the shirts of those days, and had made these for General Washington himself. She had also made flags, and there is a record of an order on the Treasury in May, 1777, "to pay Betsy Ross fourteen pounds, twelve shillings twopence for flags for the fleet in the Delaware River." She made the sample-flag, her uncle providing the means to procure the materials, and her design was adopted by the Congress on June 14, 1777, the anniversary being annually commemorated as "Flag Day." Originally there was a six-pointed star suggested by the committee, but she proposed the five-pointed star as more artistic, and they ac-

cepted it. The form of flag then adopted continues to be the American standard. She afterwards married John Claypole, whom she survived many years, and she died in January, 1836, aged 84, being buried in Mount Moriah Cemetery, on the southwestern border of the city.

GIRARD COLLEGE.

The name of Girard is familiar in Philadelphia, being repeated in streets, buildings, and financial and charitable institutions. On Third Street, south from Chestnut Street, is the fine marble building of the Girard Bank, which was copied after the Dublin Exchange. This, originally built for the first Bank of the United States, was Stephen Girard's bank until his death. One of the greatest streets in the northern part of the city is Girard Avenue, over one hundred feet wide, stretching almost from the Delaware River westward far beyond the Schuylkill River, which it crosses upon a splendid iron bridge. In its course through the northwestern section, this fine street diverges around the enclosure of Girard College, occupying grounds covering about forty-two acres. Stephen Girard, before the advent of Astor in New York, amassed the greatest American fortune. He was born in Bordeaux in 1750, and, being a sailor's son, began life as a cabin boy. He first appeared in Philadelphia during the Revolution as a small trader, and after some years was reported, in

1790, to have an estate valued at $30,000. Subsequently, through trading with the West Indies, and availing of the advantages a neutral had in the warlike period that followed, he rapidly amassed wealth, so that by 1812, when he opened his bank, he had a capital of $1,200,000; and so great was the public confidence in his integrity that depositors flocked to his institution. He increased its capital to $4,000,000; and when the war with England began in that year he was able to take, without help, a United States loan of $5,000,000. He was a remarkable man, frugal and even parsimonious, but profuse in his public charities, though strict in exacting every penny due himself. He contributed liberally to the adornment of the city and created many fine buildings. He despised the few relatives he had, and when he died in 1831 his estate, then the largest known in the country, and estimated at $9,000,000, was almost entirely bequeathed for charity.

Stephen Girard left donations to schools, hospitals, Masonic poor funds, for fuel for the poor, and other charitable purposes; but the major part of his fortune went in trust to the city of Philadelphia, partly to improve its streets and the Delaware River front, but the greater portion to endow Girard College. This was in the form of a bequest of $2,000,000 in money and a large amount of lands and buildings, together with the ground whereon the College has been built. He gave the most minute directions

about its construction, the institution to be for the support and instruction of poor white male orphans, who are admitted between the ages of six and ten years, and between the ages of fourteen and eighteen years are to be bound out as apprentices to various occupations. A clause in the will provides that no ecclesiastic, missionary or minister of any sect whatever is to hold any connection with the College, or even be admitted to the premises as a visitor; but the officers are required to instruct the pupils in the purest principles of morality, leaving them to adopt their own religious beliefs. The College building is of white marble, and the finest specimen of pure Grecian architecture in the United States. It is a Corinthian temple, surrounded by a portico of thirty-four columns, each fifty-five feet high and six feet in diameter. The building is one hundred and sixty-nine by one hundred and eleven feet, and ninety-seven feet high, the roof being of heavy slabs of marble, from which, as the College stands on high ground, there is a grand view over the city. Within the vestibule are a statue of Girard and his sarcophagus. The architect, Thomas U. Walter, achieved such fame from this building that he was afterwards employed to extend the Capitol at Washington. There are many other buildings in the College enclosure, some being little less pretentious than the College itself. This comprehensive charity has been in successful operation over a half-century, and it sup-

ports and educates some sixteen hundred boys, the endowment, by careful management, now exceeding $16,000,000.

Philadelphia is great in other charities, and notably in hospitals. Opposite Girard College are the magnificent buildings of the German Hospital and the Mary J. Drexel Home for the education of nurses, established by the munificence of John D. Lankenau, the widowed husband of the lady whose name it bears. The Drexel Institute, founded by Anthony J. Drexel, is a fine building in West Philadelphia, with $2,000,000 endowment, established for "the extension and improvement of industrial education as a means of opening better and wider avenues of employment to young men and women," and it provides for about two thousand students. The Presbyterian, Episcopal, Jewish, Methodist and Roman Catholic hospitals, all under religious care, are noted. Philadelphia is also the great medical school of the country, and the University, Jefferson, Hahnemann and Women's Colleges, each with a hospital attached, have world-wide fame. The oldest hospital, the Pennsylvania Hospital, occupying an entire block between Spruce and Pine and Eighth and Ninth Streets, was founded in 1752, and is supported almost entirely by voluntary contributions. In 1841 it established in West Philadelphia a separate Department for the Insane. The Medico-Chirurgical Hospital is a modern foundation which has grown to

large proportions. There are many libraries—not only free libraries, with branches in various parts of the city, for popular use, supported by the public funds, but also the Philadelphia Library, founded by Franklin and his friends of the Junto Literary Club in 1731, and its Ridgway Branch, established, with $1,500,000 endowment, by Dr. James Rush—a spacious granite building on Broad Street, which cost $350,000. One of the restrictions of his gift, however, excludes newspapers, he describing them as "vehicles of disjointed thinking." The Pennsylvania Historical Society also has a fine library pertaining to early Colonial history, and many valuable relics and manuscripts, including the first Bible printed in America, and the original manuscripts of *Home, Sweet Home*, and the *Star-Spangled Banner*.

NOTABLE PHILADELPHIA BUILDINGS.

There are many notable structures in Philadelphia. The United States Mint, opposite the City Hall, and fronting on Chestnut Street, has executed nearly all the coinage of the country since its establishment in 1792, the present building having been completed in 1833. It contains a most interesting collection of coins, including the "widow's mite." A fine new mint is now being erected on a much larger scale in the northwestern section of the city. The Bourse, on Fifth Street near Chestnut, erected in 1895 at a cost of $1,500,000, is the business centre, its lower

hall being the most spacious apartment in the city, and the edifice is constructed in the style of Francis I. The white marble Custom House, with fine Doric portico, was originally erected in 1819, at a cost of $500,000, for the second United States Bank, this noted bank, which ultimately suspended, having been for many years a political bone of contention. On the opposite side of the street, covering a block, is a row of a half-dozen wealthy financial institutions, making one of the finest series in existence, granite and marble being varied in several orders of architecture. The Post-office building, also on Chestnut Street, a grand granite structure in Renaissance, with a façade extending four hundred feet, cost over $5,000,000. The plain and solid Franklin Institute, designed to promote the mechanical and useful arts, is not far away.

Down nearer the river is the venerable Christ Church, with its tall spire, built in 1727, the most revered Episcopal church in the city, and the one at which General Washington and all the Government officials in the Revolutionary days worshipped. William White, a native of the city, was the rector of this church and chaplain of the Continental Congress, and in 1786 was elected the Episcopal Bishop of Pennsylvania, being ordained by the Archbishop of Canterbury at Lambeth in February, 1787. He presided over the Convention, held in this church in 1789, which organized the Protestant Episcopal

Church in the United States. Christ Church still possesses the earliest chime of bells sent from England to America, and the spire, rising nearly two hundred feet, is a prominent object seen from the river. Bishop White died in 1836, aged 88. He was also, in his early life, the rector of St. Peter's Church, another revered Episcopal church at Third and Pine Streets. In its yard is the grave of Commodore Stephen Decatur, the famous American naval officer, who, after all his achievements and victories, was killed in a duel with Commodore Barron in 1820, his antagonist also dying. The most ancient church in Philadelphia is Gloria Dei, the "Old Swedes'" Church, a quaint little structure near the Delaware River bank in the southern part of the city, built in 1700. The early Swedish settlers, coming up from Fort Christina, erected a log chapel on this site in 1677, at which Jacob Fabritius delivered the first sermon. After he died, the King of Sweden in 1697 sent over Rev. Andrew Rudman, under whose guidance the present structure was built to replace the log chapel; and it was dedicated, the first Sunday after Trinity, 1700, by Rev. Eric Biorck, who had come over with Rudman. Many are the tales told of the escapades of the early Swedes in the days of the log chapel. The Indians on one occasion undermined it to get at the congregation, as they were afraid of the muskets which the men shot out of the loopholes. The women, however, scenting danger,

brought into church a large supply of soft-soap, which they heated piping hot in a cauldron. When the redskins made their foray and popped their heads up through the floor, they were treated to a copious bath of hot soap, and fled in dismay. This is the "Old Swedes'" Church at Wicaco of which Longfellow sings in *Evangeline*. The poet, in unfolding his story, brings both Evangeline and Gabriel from Acadia to Philadelphia in the enforced exodus of 1755, and thus graphically describes the Quaker City:

"In that delightful land which is washed by the Delaware's waters,
Guarding in sylvan shades the name of Penn, the Apostle,
Stands on the banks of its beautiful stream the city he founded.
There all the air is balm, and the peach is the emblem of beauty,
And the streets still re-echo the names of the trees of the forest,
As if they fain would appease the Dryads whose haunts they molested.
There, from the troubled sea, had Evangeline landed an exile,
Finding among the children of Penn a home and a country.
Something, at least, there was, in the friendly streets of the city,
Something that spake to her heart and made her no longer a stranger;
And her ear was pleased with the Thee and Thou of the Quakers,
For it recalled the past, the old Acadian country,
Where all men were equal, and all were brothers and sisters."

In Philadelphia it is said Evangeline lived many

years as a Sister of Mercy, and it was thus that she visited the ancient almshouse to minister to the sick and dying on a Sabbath morning:

"As she mounted the stairs to the corridors, cooled by the east wind,
Distant and soft on her ear fell the chimes from the belfry of Christ Church,
While intermingled with these, across the meadows were wafted
Sounds of psalms that were sung by the Swedes in their church at Wicaco."

There she found the dying Gabriel, and both, according to the tradition, are buried in the yard of the Roman Catholic Church of the Holy Trinity, at Sixth and Spruce Streets:

"Still stands the forest primeval; but far away from its shadow,
Side by side, in their nameless graves, the lovers are sleeping.
Under the humble walls of the little Catholic churchyard,
In the heart of the city, they lie unknown and unnoticed.
Daily the tides of life go ebbing and flowing beside them,
Thousands of throbbing hearts, where theirs are at rest and forever;
Thousands of aching brains, where theirs no longer are busy;
Thousands of toiling hands, where theirs have ceased from their labors;
Thousands of weary feet, where theirs have completed their journey."

In the ancient graveyard of "Old Swedes" is buried Alexander Wilson, the American ornithologist, who was a native of Scotland, but lived most of

his life in Philadelphia, dying in 1813. The largest church in the city is the Roman Catholic Cathedral of St. Peter and St. Paul, fronting on Logan Square, an imposing Roman Corinthian structure of red sandstone, two hundred and sixteen by one hundred and thirty-six feet, and crowned by a dome rising two hundred and ten feet. The chief institution of learning is the University of Pennsylvania, the most extensive and comprehensive College in the Middle States, dating from 1740, and munificently endowed, which occupies, with its many buildings, a large surface in West Philadelphia, and has three thousand students. This great institution originated from a building planned in 1740 for a place in which George Whitefield could preach, which was also used for a charity school. This building was conveyed to trustees in 1749 to maintain the school, and they were in turn chartered as a college in 1753 "to maintain an academy, as well for the instruction of poor children on charity as others whose circumstances have enabled them to pay for their learning." This charitable feature is still maintained in the University by free scholarships.

Philadelphia is eminently a manufacturing city, and its two greatest establishments are the Cramp Shipbuilding yards in the Kensington district and the Baldwin Locomotive Works on North Broad Street, each the largest establishment of its kind in America. The city has spread over a greater territory than

any other in the United States, and sixteen bridges span the Schuylkill, with others in contemplation, its expansion beyond that river has been so extensive. The enormous growth of the town has mainly come from the adoption of the general principle that every family should live in its own house, supplemented by liberal extensions of electrical street railways in all directions. Hence, Philadelphia is popularly known as the "City of Homes." As the city expanded over the level land, four-, six-, eight- and ten-room dwellings have been built by the mile, and set up in row after row. Two-story and three-story houses of red brick, with marble steps and facings, make up the greater part of the town, and each house is generally its owner's castle, the owner in most cases being a successful toiler, who has saved his house gradually out of his hard earnings, almost literally brick by brick. There is almost unlimited space in the suburbs yet capable of similar absorption, and the process which has given Philadelphia this extensive surface goes on indefinitely. The population is also regarded as more representative of the Anglo-Saxon races than in most American cities, though the Teuton numerously abounds and speedily assimilates. The greatest extent of Philadelphia is upon a line from southwest to northeast, which will stretch nearly twenty miles in a continuous succession of paved and lighted streets and buildings.

FAIRMOUNT PARK AND SUBURBS.

Philadelphia, excepting to the southward, is surrounded by a broad belt of attractive suburban residences, the semi-rural region for miles being filled with ornamental villas and the tree-embowered and comfortable homes of the well-to-do and middle classes. Down the Schuylkill is "Bartram's Garden," now a public park, where John Bartram established the first botanic garden in America, and where his descendants in 1899 celebrated the two hundredth anniversary of his birth on June 2, 1699. His grandfather was one of the companions of William Penn, and John Bartram, who was a farmer, mastered the rudiments of the learned languages, became passionately devoted to botany, and was pronounced by Linnæus the greatest natural botanist in the world. Bartram bought his little place of about seven acres in 1728, and built himself a stone house, which still exists, bearing the inscription, cut deep in a stone, "John and Ann Bartram, 1731." He wrote to a friend describing how he became a botanist: "One day I was very busy in holding my plough (for thou seest I am but a ploughman), and being weary, I ran under a tree to repose myself. I cast my eyes on a daisy; I plucked it mechanically and viewed it with more curiosity than common country farmers are wont to do, and I observed therein many distinct parts. 'What a shame,' said my mind, or

something that inspired my mind, 'that thou shouldst have employed so many years in tilling the earth and destroying so many flowers and plants without being acquainted with their structure and their uses.'" He put up his horses at once, and went to the city and bought a botany and Latin grammar, which began his wonderful career. He devoted his life to botany, travelled over America collecting specimens, and died in 1777. At the mouth of the Schuylkill River is League Island, where the United States has an extensive navy yard, and a reserve fresh water basin for the storage of naval vessels when out of commission. The attractive Philadelphia suburban features spread westward across the Schuylkill, and are largely developed in the northwestern sections of Germantown and Chestnut Hill, Jenkintown and the Chelten-hills. In this extensive section the wealth of the people has of late years been lavishly expended in making attractive homes, and the suburban belt for miles around the city displays most charming scenery, adorned by elaborate villas, pleasant lanes, shady lawns and well-kept grounds.

The chief rural attraction of Philadelphia is Fairmount Park, one of the world's largest pleasure-grounds. It includes the lands bordering both sides of the Schuylkill above the city, having been primarily established to protect the water-supply. There are nearly three thousand acres in the Park,

and its sloping hillsides and charming water views give it unrivalled advantages in delicious natural scenery. At the southern end is the oldest water reservoir of six acres, on top of a curious and isolated conical hill about ninety feet high, which is the "Fair Mount," giving the Park its name. The Schuylkill is dammed here to retain the water, and the Park borders the river for several miles above, and its tributary, the Wissahickon, for six miles farther. The Park road entering alongside the Fairmount hill passes a colossal equestrian statue of George Washington, and beyond a fine bronze statue of Abraham Lincoln, and also an equestrian statue of General Grant. The roadways are laid on both sides of the river at the water's edge, and also over the higher grounds at the summits of the sloping bordering hills, thus affording an almost endless change of routes and views. The frequent bridges thrown across the river, several of them carrying railroads, add to the charm. An electric railway is constructed through the more remote portions, and displays their rustic beauty to great advantage. All around this spacious Park the growing city has extended, and prosperous manufacturing suburbs spread up from the river, the chief being the carpet district of the Falls and the cotton-mills of Manayunk, the latter on the location of an old-time Indian village, whose name translated means "the place of rum." In this Park, west of the Schuylkill, was

held the Centennial Exposition of 1876, and several of the buildings remain, notably the Memorial Art Gallery, now a museum, and the Horticultural Hall, where the city maintains a fine floral display. William Penn's "Letitia House," his original residence, removed from the older part of the city, now stands near the entrance to the West Park.

A large part of the northeastern bank of the Schuylkill adjoining the Park is the Laurel Hill Cemetery. Its winding walks and terraced slopes and ravines give constantly varying landscapes, making it one of the most beautiful burial-places in existence. In front, the river far beneath curves around like a bow. Some of its mausoleums are of enormous cost and elaborate ornamentation, but generally the grandeur of the location eclipses the work of the decorator. Standing on a jutting eminence is the Disston Mausoleum, which entombs an English sawmaker who came to Philadelphia without friends and almost penniless, and died at the head of the greatest sawmaking establishment on the Continent. At one place, as the river bends, the broad and rising terraces of tombs curve around like the banks of seats in a grand Roman amphitheatre. Here is the grave of General Meade who commanded at Gettysburg. In a plain, unmarked sepulchre fronting the river, hewn out of the solid rock, is entombed the Arctic explorer who conducted the Grinnell expedition in search of Sir John Franklin, Dr. Elisha Kent

Kane. A single shaft on a little eminence nearby marks the grave of Charles Thomson, the Secretary of the Continental Congress that made the Declaration of Independence. Some of the graves are in exquisite situations, many having been chosen by those who lie there. Here are buried Thomas Godfrey, the inventor of the mariner's quadrant; General Hugh Mercer, who fell at the head of the Pennsylvania troops in the Revolutionary battle of Princeton, the Scots' Society of St. Andrew having erected a monument to his memory; Commodore Isaac Hull, who commanded the American frigate "Constitution" in the War of 1812 when she captured the British frigate "Guerrière;" Harry Wright, the "father of base-ball," who died in 1895; and Thomas Buchanan Read, the poet-artist. At the cemetery entrance is the famous "Old Mortality" group, carved in Scotland and sent to Philadelphia. The quaint old Scotsman reclines on a gravestone, and pauses in his task of chipping-out the half-effaced letters of the inscription, while the little pony patiently waits alongside of him for his master and Sir Walter Scott to finish their discourse.

The peculiar charm of Philadelphia suburban scenery, however, is the Wissahickon—the "catfish stream" of the Indians. This is a creek rising in the hills north of the city, and breaking through the rocky ridges, flowing by tortuous course to the Schuylkill a short distance above Laurel Hill. It is

an Alpine gorge in miniature, with precipitous sides rising two to three hundred feet, and the winding road along the stream gives a charming ride. Populous suburbs are on the higher ridges, but the ravine has been reserved and carefully protected, so that all the natural beauties remain. A high railway bridge is thrown across the entrance of the gorge at the Schuylkill, and rounding, just beyond, a sharp rocky corner, the visitor is quickly within the ravine, the stream nestling deep down in the winding fissure. For several miles this attractive gorge can be followed; and high up on its side, in a commanding position near the summit of the enclosing ridge, one of the residents has placed a statue of William Penn, most appropriately bearing the single word at its base—"Toleration." This splendid gorge skirts the northwestern border of the popular suburb of Germantown, and the creek emerges from its rocky confines at the foot of Chestnut Hill, where it rends the ridge in twain, and the hillsides are dotted with attractive villas. This is a fashionable residential section whose people have a magnificent outlook over the rich agricultural region of the upper Wissahickon Valley and the hills beyond.

In Germantown is the historic Chew House, bearing the marks of cannon balls, which was the scene of the battle of Germantown in October, 1777, when the British under Lord Howe, then holding Philadelphia, defeated General Washington, and the darkest

period of the Revolution followed, the Americans afterwards retiring to their sad winter camp at Valley Forge. This suburb of Germantown is almost as old as Philadelphia. It was originally settled in 1683 by Germans who came from Cresheim, a name that is preserved in the chief tributary of the Wissahickon. Their leader was Daniel Pastorius, who bought a tract of fifty-seven hundred acres of land from William Penn for a shilling an acre, and took possession on October 6th. Their settlement prospered and attracted attention in the Fatherland. In 1694 a band of religious refugees, having peculiar tenets and believing that the end of the world was approaching, determined to migrate to Germantown. They were both Hollanders and Germans, and came from Rotterdam to London, whence, under the guidance of Johannes Kelpius, they sailed for America upon the ship "Sara Maria." They were earnest and scholarly men, and Kelpius, who was a college graduate, was a profound theologian. They called themselves the "Pietists." Upon their voyage they had many narrow escapes, but every danger was averted by fervent prayers. Their vessel ran aground, but was miraculously floated; they were nearly captured by the French, but, mustering in such large numbers on the deck of the "Sara Maria," they scared the enemy away; they were badly frightened by an unexpected eclipse of the sun; but in every case prayers saved them, and on

June 14th they safely landed in Chesapeake Bay, marching overland to the Delaware and sailing up to Philadelphia, where they disembarked.

In solemn procession, on June 23, 1694, led by Kelpius, they walked, two and two, through the little town, which then had some five hundred houses. They called on the Governor, William Markham, representing Penn, and took the oath of allegiance to the British Crown. In the evening they held a solemn religious service on "the Fair Mount," at the verge of the Schuylkill. In it they celebrated the old German custom of "Sanct Johannes" on St. John's eve. They lighted a fire of dry leaves and brushwood on the hill, casting into it flowers, pine boughs and bones, and then rolled the dying embers down the hillside as a sign that the longest day of the year was past, and the sun, like the embers, would gradually lose its power. The next morning was the Sabbath, and they went out to Germantown, where they were warmly welcomed. They built their first house, since called the Monastery, near the Wissahickon Creek, where they worked and worshipped. Their house they called "The Woman of the Wilderness," and upon its roof, day and night, some of them stood, closely observing the changing heavens. With prayers and patience they watched for the end of the world and the coming of the Lord, and they obeyed the ministry of Kelpius. He lived in a cave, and as his colony of enthusiasts gradually

dwindled, through death and desertion, he came to be known as the "Hermit of the Wissahickon." Here he dug his well two centuries ago, and the "Hermit's Pool" still exists. He constantly preached the near approach of the millennium, and exhibited his magical "wisdom stone." Finally, wearying yet still believing, he gave up, cast his weird stone into the stream, and in 1704 he died, much to the relief of the neighboring Quaker brethren, who did not fancy such mysterious alchemy so near the city of Penn. These "Pietists," or "Kelpians," as they were afterwards called, dispersed over the country, and had much to do with guiding the religious life and mode of worship among the early German settlers in Pennsylvania. Everywhere in German Pennsylvania there are traces of their influence, and especially at Ephrata and Waynesboro they have had pious and earnest followers. After the death of Kelpius, their last survivor in Germantown was Dr. Christopher DeWitt, famed as a naturalist, an astronomer, a clock-maker and a magician. He was a close friend of John Bartram, lived an ascetic life, became blind and feeble, and finally died an octogenarian in 1765, thus closing with his life the active career of the Kelpian mystics.

THE SCHUYLKILL RIVER.

One of the romances of Fairmount Park is attached to the little stone cottage, with overhanging

roof, down by the Schuylkill River bank, where tradition says that the Irish poet, Tom Moore, briefly dwelt when he visited Philadelphia in the summer of 1804. This cottage tradition may be a myth, but the poet when here composed an ode to the cottage and to the Schuylkill, which is as attractive as the bewitching river scene itself. The famous ballad begins:

"I knew by the smoke that so gracefully curled
Above the green elms that a cottage was near,
And I said, 'If there's peace to be found in the world,
A heart that was humble might hope for it here.'"

Tom Moore's letters written at that time generally showed dislike for much that he saw on his American journey, but he seems to have found better things at Philadelphia, and was delighted with the Quaker hospitality. His ode to the Schuylkill shows that its beauties impressed him, and gives evidence of his regard for the people:

"Alone by the Schuylkill, a wanderer roved,
And bright were its flowery banks to his eye;
But far, very far, were the friends that he loved,
And he gazed on its flowery banks with a sigh.

"The stranger is gone—but he will not forget,
When at home he shall talk of the toil he has known,
To tell with a sigh what endearments he met,
As he stray'd by the wave of the Schuylkill alone!"

The Schuylkill River is the chief tributary of the Delaware, an Allegheny Mountain stream about one

hundred and twenty miles long, coming out of the Pennsylvania anthracite coal-fields, and falling into the Delaware at League Island in such a lowland region that its mouth is scarcely discernible. In fact, the early Dutch explorers of the Delaware passed the place repeatedly and never discovered it; and when the stream above was afterwards found by going overland, and traced down to its mouth, they appropriately called it the Schuylkill, meaning the "hidden river." The Indian name was the "Ganshowe-hanne," or the "roaring stream," on account of its many rapids. The lowest of these, which gave the name of the "Falls" to a Philadelphia suburb, was obliterated by the backwater from the Fairmount water-works dam. The river valley is populous, rich in manufactures and agriculture, and, as it winds through ridge after ridge of the Alleghenies, displays magnificent scenery. Both banks are lined with railways, which bring the anthracite coal from the mines down to tidewater.

Journeying up the Schuylkill, we pass the flourishing manufacturing towns of Conshohocken and Norristown and come into the region of the "Pennsylvania Dutch," where the inhabitants, who are mostly of Teutonic origin, speak a curious dialect, compounded of German, Dutch, English and some Indian words, yet not fully understood by any of those races. These industrious people are chiefly farmers and handicraftsmen, and they make up much of the pop-

ulation of eastern Pennsylvania, while their "sauerkraut" and "scrapple" have become staple foods in the State. Twenty-four miles above Philadelphia, alongside a little creek and almost under the great Black Rock, a towering sandstone ridge, was the noted Valley Forge, the place of encampment of Washington's tattered and disheartened army when the defeats at Brandywine and Germantown and the loss of Philadelphia made his prospects so dismal in the winter of 1777–78, one of the severest seasons ever experienced in America. The encampment is preserved as a national relic, the entrenchments being restored by a patriotic association, with the little farmhouse beside the deep and rugged hollow, near the mouth of the creek, which was Washington's headquarters. Phœnixville and Pottstown are passed, and Birdsboro', all places of busy and prosperous iron manufacture, and then the river valley leads us into the gorge of the South Mountain.

READING AND POTTSVILLE.

The diminutive Schuylkill breaks its passage through this elevated range, with Penn's Mount on one side and the Neversink Mountain on the other, and here is located the most populous city of the Schuylkill Valley—Reading, with seventy thousand population, a seat of iron-making and extensive railway shops, having a fertile agricultural region in the adjacent valleys. This expanding and attractive city

gives its name to, and obtains much of its celebrity from the "Philadelphia and Reading Railway," the colossal financial institution whose woes of bankruptcy and throes of reconstruction have for so many years occupied the attention of the world of finance. This great railway branches at Reading, and its western line runs off through red sandstone rocks and among iron mills and out upon a high bridge, thrown in a beautiful situation across the Schuylkill, and proceeds over the Lebanon Valley to the Susquehanna River at Harrisburg. This rich limestone valley, between the South Mountain and the Blue Ridge, is a good farming district, and also a wealthy region of iron manufacture. The Reading system also sends its East Pennsylvania route eastward to Allentown in the Lehigh Valley, and thence to New York. Factory smokes overhang Reading, through which the Schuylkill flows in crooked course, spanned by frequent bridges, and puffing steam jets on all sides show the busy industries. A good district surrounds Reading in the mountain valleys, and the thrifty Dutch farmers in large numbers come into the town to trade. The high forest-clad mountains rise precipitously on both sides, with electric railways running up and around them, disclosing magnificent views. The "old red sandstone" of these enclosing hills has been liberally hewn out to make the ornamental columns for the Court House portico and build the castellated jail, and also the red gothic chapel

THE DOMES OF THE YOSEMITE

and elaborate red gateway of the "Charles Evans' Cemetery," where the chief townsfolk expect, like their ancestry, to be buried. The visitor who wishes to see one of the most attractive views over city, river, mountain and distant landscape can climb by railway up to the "White Spot," elevated a thousand feet above the river, on Penn's Mount. This point of outlook is an isolated remnant of Potsdam sandstone, lying, the geologists say, unconformably on the Laurentian rock.

Beyond Reading, the Schuylkill breaks through the Blue Ridge at Port Clinton Gap, eighteen miles to the northwest. The winding and romantic pass is about three miles long, and just beyond there is, at Port Clinton, a maze of railway lines where the Reading Company unites its branches converging from various parts of the anthracite coal-fields. The Little Schuylkill River here falls into the larger stream, and a branch follows it northward to Tamaqua, while the main line goes westward to Pottsville. The summit of the Blue Ridge is the eastern boundary of the coal-fields, and the country beyond is wild and broken. The next great Allegheny ridge extending across the country is the Broad Mountain beyond Pottsville, though between it and the Blue Ridge there are several smaller ridges, one being Sharp Mountain. The country is generally black from the coal, and the narrow and crooked Schuylkill has its waters begrimed by the masses of

culm and refuse from the mines. Schuylkill Haven, ninety miles from Philadelphia, is where the coal trains are made up, and branches diverge to the mines in various directions. Three miles beyond is Pottsville, confined within a deep valley among the mountains, its buildings spreading up their steep sides, for here the malodorous and blackened little river breaks through Sharp Mountain. This is a city of fifteen thousand people, and the chief town of the Schuylkill or Southern coal-field, which produces ten millions of tons of anthracite annually. The whole country roundabout is a network of railways leading to the various mines and breakers, and there are nearly four hundred miles of railways in the various levels and galleries underground. We are told that in the eighteenth century John Pott built the Greenwood Furnace and Forge, and laid out this town; and afterwards, when coal-mining was developed, there came a rush of adventurers hither; but of late years Pottsville has had a very calm career.

To the northward of the Schuylkill or Southern coal-field, and beyond the Broad Mountain, is the "Middle coal-field," which extends westward almost to the Susquehanna River, and includes the Mahanoy and Shamokin Valleys. Both these fields also extend eastward into the Lehigh region; and it is noteworthy that as all these coal measures extend eastward they harden, while to the westward they soften. The hardest coals come from the Lehigh district, and

they gradually soften as they are dug out to the westward, until, on the other side of the main Allegheny range, they change into soft bituminous, and farther westward their constituents appear in the form of petroleum and as natural gases. The region beyond Pottsville is unattractive. Various railways connect the Schuylkill and Lehigh regions, and cross over or through the Broad Mountain. The district is full of little mining villages, but has not much else. It is a rough country, with bleak and forbidding hills, denuded of timber by forest fires, with vast heaps of refuse cast out from the mines, some of them the accumulations of sixty or seventy years. Breakers are at work grinding up the fuel, which pours with thundering noise into the cars beneath. The surface is strewn with rocks and *débris*, and the dirty waters of the streams are repulsive. These blackened brooks of the Broad Mountain are the headwaters of the Schuylkill River.

THE NEW JERSEY COAST RESORTS.

The Delaware River divides Pennsylvania from New Jersey, and at Camden, opposite Philadelphia, there has grown another large city from the overflow of its population. Ferries, and at the northern end of Philadelphia harbor an elevated railway bridge, cross over to Camden, while for miles the almost level surface of New Jersey has suburban towns and villas, the homes of thousands whose busi-

ness is in Philadelphia. The New Jersey seacoast also is a succession of watering-places where the population goes to cool off in the summer. The whole New Jersey coast of the Atlantic Ocean is a series of sand beaches, interspersed with bays, sounds and inlets, a broad belt of pine lands behind them separating the sea and its bordering sounds and meadows from the farming region. This coast has become an almost unbroken chain of summer resorts from Cape May, at the southern extremity of New Jersey, northeastward through Sea Isle City, Avalon, Ocean City, Atlantic City, Brigantine, Beach Haven, Sea Girt, Asbury Park, Ocean Grove, Long Branch, Seabright, etc., to Sandy Hook, where the long sand-strip terminates at the entrance to New York harbor. To these many attractive places the summer exodus takes the people by the hundreds of thousands. The chief resort of all is Atlantic City, which has come to be the most popular sea-bathing place of the country, the railroads running excursion trains to it even from the Mississippi Valley. Three railroads lead over from Philadelphia across the level Jersey surface, and their fast trains compass the distance, fifty-six miles, in an hour. The town is built on a narrow sand-strip known as Absecon Island, which is separated from the mainland by a broad stretch of water and salt meadows. Absecon is an Indian word meaning "the place of the swans." The beach is one of the finest on the coast, and along

its inner edge is the famous "Board Walk" of Atlantic City, an elevated promenade mostly forty feet wide, and four miles long. On the land side this walk is bordered by shops, bathing establishments and all kinds of amusement resorts, while the town of hotels, lodging-houses and cottages, almost all built of wood, stretches inland. The population come out on the "Board Walk" and the great piers, which stretch for a long distance over the sea. It is the greatest bathing-place in existence, and in the height of the season, July and August, fifty thousand bathers are often seen in the surf on a fine day, with three times as many people watching them. Enormous crowds of daily excursionists are carried down there by the railways. The permanent population is about twenty thousand, swollen in summer often fifteen- or twenty-fold. Atlantic City is also a popular resort in winter and spring, and is usually well filled at Eastertide.

The other New Jersey resorts are somewhat similar, though smaller. Cape May, on the southern extremity of the Cape, is popular, and has a fine beach five miles long. The coast for many miles northeastward has cottage settlements, the beaches having similar characteristics. Many of these settlements also cluster around Great Egg Harbor and Barnegat Bay, both favorite resorts of sportsmen for fishing and shooting. Asbury Park and Ocean Grove are twin watering-places on the northern Jersey coast

which have large crowds of visitors. The former is usually filled by the overflow from the latter, who object to the Ocean Grove restrictions. Ocean Grove is unique, and was established in 1870 by a Camp Meeting Association of the Methodist Episcopal Church. Here many thousands, both young and old, voluntarily spend their summer vacations under a religious autocracy and obey the strict rules. It is bounded by the sea, by lakes on the north and south, and by a high fence on the land side, and the gates are closed at ten o'clock at night, and all day Sunday. The drinking of alcoholic beverages and sale of tobacco are strictly prohibited, and no theatrical performances of any kind are allowed. No bathing, riding or driving are permitted on Sunday, and at other times the character of the bathing-dresses is carefully regulated. There is a large Auditorium, accommodating ten thousand people, and here are held innumerable religious meetings of all kinds. The annual Camp Meeting is the great event of the season, and among the attractions is an extensive and most complete model of the City of Jerusalem.

To the northward is Long Branch, the most fashionable and exclusive of the New Jersey coast resorts, being mainly a succession of grand villas and elaborate hotels, stretching for about four miles along a bluff which here makes the coast, and has grass growing down to its outer edge almost over the water. In the three sections of the West End,

Elberon and Long Branch proper, the latter getting its name from the "Long branch" of the Shrewsbury River, there are about eight thousand regular inhabitants, and there come here about fifty thousand summer visitors, largely from New York. The great highway is Ocean Avenue, running for five miles just inside the edge of the bluff, which, in the season, is a most animated and attractive roadway. The hotels and cottages generally face this avenue. The most noted cottages are the one which General Grant occupied for many years, and where, during his Presidency in 1869–77, he held "the summer capital of the United States," and the Franklyn Cottage, where President Garfield, after being shot in Washington, was brought to die in 1881. The most famous show place at Long Branch is Hollywood, the estate of the late John Hoey, of Adams Express Company, who died there in 1892, its elaborate floral decorations being much admired.

SHACKAMAXON TO BRISTOL.

Journeying up the Delaware from Philadelphia, we pass Petty Island, where the great Indian chief of the Lenni Lenapes, Tamanend, had his lodge—the chieftain since immortalized as St. Tammany, who has given his name to the Tammany Society of politicians who rule New York City. Petty on the old maps is called Shackamaxon Island, a derivation of the original Indian name of Cackamensi. St. Tam-

many is described as a chief who was so virtuous that "his countrymen could only account for the perfections they ascribe to him by supposing him to be favored with the special communications of the Great Spirit." In the eighteenth century many societies were formed in his honor, and his festival was kept on the 1st of May, but the New York Society is the only one that has survived. Farther up, the Tacony Creek flows into the Delaware, the United States having a spacious arsenal upon its banks. The name of this creek was condensed before Penn's time, by the Swedes, from its Indian title of Taokanink. Beyond, the great manufacturing establishments of the city gradually change to charming villas as we move along the pleasant sloping banks and through the level country, and soon we pass the northeastern boundary of Philadelphia, at Torresdale. This boundary is made by the Poquessing Creek, being the aboriginal Poetquessink, or "the stream of the dragons."

Across the river, on the Jersey shore, formerly roamed the Rankokas Indians, an Algonquin tribe, whose name is preserved in the Rancocas Creek, which is one of the chief tributaries flowing in from New Jersey. At Beverly, not far above, is one of the most popular suburban resorts, the villas clustering around a broad cove, known as Edgewater, which appears much like a miniature Bay of Naples. Over opposite is the wide Neshaminy Creek, flowing down from the Buckingham Mountain in Pennsylvania, its

Indian title of Nischam-hanne, meaning "the two streams flowing together," referring to its branches. The earliest settlers along this creek were Scotch-Irish, and their pastor in 1726 was Rev. William Tennent, the famous Presbyterian preacher, who founded the celebrated "Log College" on the Neshaminy, "built of logs, chinked and daubed between, and one story high," as it was well described. From this simple college, which was about twenty feet square, were sent out many of the famous Presbyterian preachers of the eighteenth century; and from it grew, in 1746, the great College of New Jersey at Princeton, and in 1783 Dickinson College, at Carlisle, Pennsylvania, besides many other schools which were started by its alumni. William Tennent's son, Gilbert, was his assistant and successor. The great Whitefield preached to an audience of three thousand at this College in 1739. He was attracted there by Gilbert Tennent's fame as a preacher, and of him on one occasion wrote, "I went to the meeting house to hear Mr. Gilbert Tennent preach, and never before heard I such a searching sermon; he is a son of thunder, and does not regard the face of man."

The Delaware River broadens into two channels around Burlington Island, having on either hand the towns of Bristol and Burlington, both coeval with the first settlement of Philadelphia, and Bristol at that early day having had an ambition to become the loca-

tion of Penn's great city. The ferry connecting them was established two years before Penn came to Philadelphia, and in the eighteenth century they had a larger carrying trade. Bristol began in 1680 under a grant from Edmund Andros, then the Provincial Governor of New York, for a town site and the ferry, which is curiously described in the Colonial records as "the ferry against Burlington," then the chief town in West Jersey. The settlement was called New Bristol, from Bristol in England, where lived Penn's wife, Hannah Callowhill. It was the first county seat of Bucks when Penn divided his Province into the three counties—Chester, Philadelphia and Buckingham. It was for many years a great exporter of flour to the West Indies. Its ancient Quaker Meeting House dates from 1710, and St. James' Episcopal Church from 1712; but the latter, which received its silver communion service from the good Queen Anne, fell into decay and has been replaced by a modern structure. Its Bath Mineral Springs made it the most fashionable watering-place in America in the eighteenth century, but Saratoga afterwards eclipsed them, and their glory has departed. Prior to the Revolution, Bristol built more shipping than Philadelphia; and, while quiet and restful, its comfortable homes and the picturesque villas along the Delaware River bank above the town tell of its prosperity now.

OLD BURLINGTON.

The ancient town of Burlington, clustered behind its "Green Bank" or river-front street on the New Jersey shore, antedates Philadelphia five years. The Quaker pioneers are believed to have been the first Europeans who saw its site. The noted preacher George Fox, in 1672, journeyed from New England to the South, and rode on horseback over the site of Burlington at Assiscunk Creek, reporting the soil as good "and withal a most brave country." When Penn became Trustee for the insolvent Billynge, a Proprietor of West Jersey, much of his land was sold to Quakers, who migrated to the American wilderness to escape persecution at home. Thus Burlington was the first settlement founded by Quaker seekers after toleration in the New World:

"About them seemed but ruin and decay,
Cheerless, forlorn, a rank autumnal fen,
Where no good plant might prosper, or again
Put forth fresh leaves for those that fell away;
Nor could they find a place wherein to pray
For better things. In righteous anger then
They turned; they fled the wilderness of men
And sought the wilderness of God. And day
Rose upon day, while ever manfully
Westward they battled with the ocean's might,
Strong to endure whatever fate should be,
And watching in the tempest and the night
That one sure Pharos of the soul's dark sea—
The constant beacon of the Inner Light."

In the spring of 1677 the "goode shippe Kent," Gregory Marlowe, master, sailed from London, bound for West Jersey, with two hundred and thirty Quakers, about half coming from London and the others from Yorkshire; two dying on the voyage. They ascended the Delaware to the meadow lands below the mouth of Assiscunk Creek, landing there in June, and in October made a treaty with the Indians, buying their lands from the Rancocas as far up as Assunpink Creek at Trenton. Their settlement was first called New Beverly, and then Bridlington, from the Yorkshire town whence many of them came, but it finally was named Burlington. They made a street along the river, bordered with greensward, and called the "Green Bank," and drew a straight line back inland, calling it their Main Street, and the Londoners settled on one side and the Yorkshiremen on the other. The old buttonwood tree, to which was moored the early ships bringing settlers, still stands on the Green Bank, a subject of weird romance. Elizabeth Powell, the first white child, was born in July, 1677. The next May, 1678, they established a "Monthly Meeting of Friends" at Burlington, of which the records have been faithfully kept. In June the graveyard was fenced in, and the old Indian chief, Ockanickon, a Quaker convert to Christianity, was among the first buried there. In August the first Quaker marriage was solemnized in meeting, this first certificate being signed by ten men and three

women Friends as witnesses. In 1682, just as Penn was coming over, they decided to build their first meeting house—a hexagonal building, forty feet in diameter, with pyramidal roof, which was occupied the next year. In 1685 they decided that a hearse should be built, the entry on the record being an order for a "carriage to be built for ye use of such as are to be laid in ye ground."

Burlington grew, and was long the seat of government of the Province of West Jersey, being the official residence of the Provincial Governors, the last of whom was William Franklin, natural son of Benjamin Franklin. It had wealthy merchants and much shipping, and, despite its peacefulness, equipped privateers to fight the French. Its famous old Episcopal Church of St. Mary had the corner-stone laid in 1703 under the favor of Queen Anne, who made a liberal endowment of lands, much being yet held, and gave it a massive and greatly prized communion service. This old church is cruciform, with a little belfry, and a stone let into the front wall bears the inscription "One Lord, one faith, one baptism." In the extensive churchyard alongside is the modern St. Mary's Church, of brownstone, with a tall spire, also cruciform. This is the finest church in Burlington. When "Old St. Mary's" was built with its belfry, the Friends did not like the innovation, and long gazed askance at the "steeple house," as they called it; so that Talbot, the first rector, sturdily retaliated,

calling the Quakers "anti-Christians, who are worse than the Turks." Many of St. Mary's parishioners of to-day are descended from these maligned Quakers. The early records of the Meeting are filled with entries showing that charges were brought against members for various shortcomings. One was admonished for "taking off his hat" at a funeral solemnized in the "steeple house;" others gave testimony of "uneasiness" on account of the placing of "gravestones in the burial-ground;" a query was propounded, "Are Friends in meeting preserved from sleeping or any other indecent behavior, particularly from chewing tobacco and taking snuff?" A record was also made of testimony against "a pervading custom of working on First days in the time of hay and harvest" when rain threatened. The descendants of these good people have established St. Mary's Hall and Burlington College, noted educational institutions. Probably the most famous son of Burlington was the distinguished novelist, James Fenimore Cooper, born in 1789, but taken in his infancy by his parents to his future home at Cooperstown, in Central New York. The town was bombarded by the British gunboats that sailed up the Delaware in 1778, but since then the career of Burlington has been eminently peaceful.

BORDENTOWN AND ITS MEMORIES.

Above Burlington Island the Delaware winds around a jutting tongue of flat land, "Penn's Neck,"

which is one of the noted regions of the river, the ancient "Manor of Pennsbury." This was Penn's country home, originally a tract of over eight thousand acres, the Indian domain of "Sepessing." His house, which he occupied in 1700–01, was then the finest on the river, but it long ago fell into decay, and the manor was all sold away from his descendants during the eighteenth century. At the eastern extremity of "Penn's Neck," on the New Jersey shore, is White Hill, with the village of Bordentown beyond, up Crosswick's Creek. Here is a region redolent with historical associations. The old buildings along the river bank were the railway shops of the famous "Camden and Amboy," whose line, coming along the Delaware shore, goes off up Crosswick's Creek to cross New Jersey on the route to New York. Above is the dense foliage of Bonaparte Park, now largely occupied by the Convent and Academy of St. Joseph. Bordentown was a growth of the railway, having been previously little more than a ferry, originally started by Joseph Borden. Its most distinguished townsman was Admiral Charles Stewart, "Old Ironsides" of the American navy, a relic of the early wars of the country, his crowning achievement being the command of the frigate "Constitution" when she captured the two British vessels, "Cyane" and "Levant." He was the "Senior Flag Officer" of the navy when he died in 1860 on his Bordentown farm, to which he had returned. The

old house where he lived is on a bluff facing the river. He was the grandfather of the noted Irish leader, Charles Stewart Parnell.

To Bordentown, in 1816, Joseph Bonaparte, the ex-King of Naples and of Spain, and eldest brother of Napoleon, came to live, as the Count de Survilliers, and bought the estate known since as Bonaparte Park. It was through Stewart's persuasion, mainly, that he located there, the estate covering ten farms of about one thousand acres. Lafayette visited him in 1824, and Louis Napoleon, afterwards Napoleon III., in 1837. Joseph returned to Europe in 1839, dying in Florence in 1844. Another famous resident of Bordentown was Prince Murat, the nephew of Napoleon and of Joseph, and the son of the dashing Prince Joachim Murat, who was King of the Sicilies, and was shot by sentence of court-martial after Waterloo. Prince Murat came in 1822, bought a farm, got married, lived a rather wild life, but was generally liked, and, going through various fortunes, returned to France after the Revolution of 1848 and was restored to his honors. He was with Marshal Bazaine in the capitulation of Metz in 1870 and became a prisoner of war, and died in 1878.

THE STORY OF CAMDEN AND AMBOY.

The great memory of Bordentown, however, is of the famous railroad, originally begun there, whose managers for nearly a half-century so successfully

ruled New Jersey that it came to be generally known throughout the country as "the State of Camden and Amboy." In the little old Bordentown station, which still exists, set in the bottom of a ravine, with the house built over the railroad, were for many years held the annual meetings of the corporation; and its magnates also met in almost perpetual session, to generally run things, social, political and financial, for the State of New Jersey, and semi-annually declare magnificent dividends. Not far from this station a monument marks the place of construction of the first piece of railway track in New Jersey, laid by the Camden and Amboy Company in 1831. Upon this track the first movement of a passenger train by steam was made by the locomotive "John Bull," on November 12th of that year. This granite monument, erected in 1891 to commemorate the sixtieth anniversary, stands upon a foundation composed of the stone blocks on which the first rails were laid, and two of these original rails encircle it. A bronze tablet upon the monument represents the old "John Bull," with his primitive whisky-cask tender, and the two little old-time passenger coaches which made up the first train he drew. Thus began the great railroad highway between the two chief cities of the United States.

The original method of transport between Philadelphia and New York was by steamboat on the Delaware to South Trenton, stages from Trenton to New Brunswick on the Raritan River, and then by

steamboat to New York. This was the "Union Line," which for many years carried the passengers, and of which John Stevens was the active spirit. He conceived the first idea of a railway, and in 1817 procured the first railway charter in America for a railroad upon his stage route between Trenton and New Brunswick. In subsequent years there were advocates both of a railway and a canal across New Jersey, his son, Robert L. Stevens, being the railway chieftain, while Commodore Robert F. Stockton championed the canal, the rival projects appearing before the New Jersey Legislature in 1829–30, and causing a most bitter controversy. It is related that the conflict was ended in a most surprising manner. Between the acts of a play at the old Park Theatre in New York, Stevens and Stockton accidentally met in the vestibule, and after a few minutes' talk agreed to end their dispute by joining forces. The result was that on February 4, 1830, both companies were chartered—the "Camden and Amboy Railroad and Transportation Company" and the "Delaware and Raritan Canal Company." In furtherance of this compromise, what is known as the celebrated "Marriage Act" was passed a year later, creating the "Joint Companies," their stock being combined at the same valuation, though each had a separate organization. They were given a monopoly of the business, paying transit dues to the State of ten cents per passenger and fifteen cents per ton of freight

carried, and this afterwards practically paid all the expenses of the New Jersey State Government. The railroad was completed between Bordentown and Amboy in 1832, and on December 17th the first passengers went through, fifty or sixty of them. It was a rainy day, and the cars were drawn by horses, for they could not in those days trust their locomotive out in the rain. The next year regular travel began, galloping horses taking the cars from Bordentown over to Amboy in about three hours, there being three relays. Later in the year the locomotive "John Bull" took one train daily, each way. In 1871 all the railway and canal properties of the two companies, which had become very extensive, were absorbed by the Pennsylvania Railroad, which pays as rental 10 per cent. annual dividends on the stocks.

The line of the Delaware and Raritan Canal begins at Crosswick's Creek in Bordentown, and is constructed alongside the Delaware River up to Trenton, and thence across New Jersey to the Raritan River at New Brunswick. This is a much-used "inside water route," and it had one of the old lines of the railroad constructed on the canal bank all the way. It was in former times a very profitable route, and is said to have made most of the dividends of the old monopoly, as it carried the greater part of the freight between the cities. It was originally projected in 1804, but the scheme slumbered for years. When the route was surveyed through Princeton,

where Commodore Stockton lived, he became interested, and he induced his father-in-law, John Potter, of South Carolina, who had over $500,000 in the United States Bank, to withdraw the money and invest it in the canal, he being the chief shareholder. Thus his fortune was not only saved from the bank's subsequent collapse, but was increased by the profitable investment. The canal is forty-three miles long, with fourteen locks in its course, having an aggregate rise and fall of one hundred and fifty feet. Its enlargement to the dimensions of a ship canal is suggested.

THE TRENTON GRAVEL.

In journeying up the Delaware and approaching Trenton, we have passed through a region of most interesting geological development. All along are evidences of the deposit of the drift from above, which is popularly known as the "Trenton gravel." The Delaware flows southeast from the Kittatinny Water Gap to Bordentown, and then, impinging against the cretaceous stratified rocks of New Jersey, abruptly turns around a right-angled bend and goes off southwestward towards Philadelphia. The river has thus deposited the Trenton gravels, composed of the drift of most of the geological formations in its upper waters, throughout its course, on the Pennsylvania side from Trenton down below Philadelphia. This deposit is fifty feet deep on the river bank in Philadelphia, and underlies the river bed for nearly a

hundred feet in depth. At Bristol the deposit stretches two miles back from the river, and at Trenton it is almost universal. The material, which in the lower reaches is generally fine, grows coarser as the river is ascended, until at Trenton immense boulders are often found imbedded. We are told by geologists that at the time of the great flood in the river which deposited the gravel, the lower part of Philadelphia, the whole of Bristol and Penn's Neck and almost all Trenton were under water. The gravel has disclosed bones of Arctic animals—walrus, reindeer and mastodon—and also traces of ancient mankind. The latter have been found at Trenton and on Neshaminy Creek, indicating the presence of a race of men said to have lived about seven thousand years ago. The river has also made immense clay deposits all along, which was done at a time when the water flowed at a level more than a hundred feet higher than now.

In the early geological history of the Delaware it is found that all southern New Jersey lay deep beneath the Atlantic, whose waves broke against the ranges of hills northwest and north of Philadelphia, and an inlet from the sea extended into the great Chester limestone valley behind them. This whole region, then probably five hundred feet lower than now, was afterwards slowly upheaved, and the waters retreated. Subsequently the climate grew colder, and the great glacial ice-cap crept down from Green-

land and Labrador, forming a huge sea of ice, thousands of feet thick, which advanced on the Delaware to Belvidere, sixty miles north of Philadelphia. Then there came another gradual change; the land descended to nearly two hundred feet below the present level, and again the waters overflowed almost the whole region. This was ice-cold, fresh water, bearing huge icebergs and floes, which stranded on the hills, forming a shore on the higher lands northwest of Philadelphia. The river channel was then ten miles wide and two hundred feet deep all the way down from Trenton, and a roaring flood depositing the red gravel along its bed. As the torrent, expending its force, though still filled with mud and sand from the base of the glacial ice-cap, became more quiet, it laid down the clays, the stranded icebergs dropping their far-carried boulders all along the route. This era of cold water and enormous floods is computed to have occupied a period of about two hundred and seventy thousand years, and then the "Ice Age" finally terminated. The land rose about to its present level, the waters retreated, and elevated temperatures thawed more and more of the glaciers remaining in the headwaters, so that there came down the last great floods which deposited the "Trenton gravel." The river was still wide and deep, and Arctic animals roamed the banks. Mankind then first appeared, living in primitive ways in caves and holes, and hunting and fish-

ing along the swollen Delaware ten thousand years ago. Occasionally they dropped in the waters their rude stone implements and weapons, which were buried in the gravel, and, being recently found, are studied to tell the story of their ancient owners. The river deposited its gravel and the channel shrunk with dwindling current, moving gradually eastward as it eat its way into the cretaceous measures. The primitive man retired, making way for the red Indian, and the present era dawned, with the more moderate climate, and with again a slow sinking of the land, which the geologists say is now in progress.

TRENTON AND ITS BATTLE MONUMENT.

Trenton, the capital of New Jersey, is thirty miles from Philadelphia, a prosperous city with seventy thousand people. The first and most lasting impression many visitors get of it is of the deep rift cut into the clays and gravels of the southern part of the town, to let the Pennsylvania Railroad go through. Here, as everywhere, are displayed the lavish deposits of the "Trenton gravel" as the railway passes under the streets, and even under the Delaware and Raritan Canal, to its depressed station alongside Assunpink Creek of Revolutionary memory, the chief part of the city spreading far to the northward. Trenton is as old as Philadelphia, its reputed founder being Mahlon Stacy, who came up from Burlington Friends' Meeting, while the settlement was named

for William Trent, an early Jersey law-maker. The Trenton potteries are its chief industry, established by a colony of Staffordshire potters from England, attracted by its prolific clay deposits; and the conical kilns, which turn out a product worth five or six millions of dollars annually, are scattered at random over the place. Their china ware has been advanced to a high stage of perfection, and displays exquisite decoration. The Trenton cracker factories are also famous. The finest building is the State House, as the Capitol is called, the Delaware River's swift current bubbling over rocks and among grassy islands out in front of the grounds. At Broad and Clinton Streets, the intersection of two of the chief highways, mounted as an ornament upon a drinking-fountain, is the famous "Swamp Angel" cannon, brought from Charleston harbor after the Civil War. This was one of the earliest heavy guns made, plain and rather uncouth-looking, about ten feet long, and rudely constructed in contrast with the elongated and tapering rifled cannon of to-day, and it rests upon a conical pile of brownstone. It was the most noted gun of the Civil War, an eight-inch Parrott rifle, or two-hundred-pounder, and, when fired, carried a one-hundred-and-fifty-pound projectile seven thousand yards from a battery on Morris Island into the city of Charleston, which was then regarded as a prodigious achievement. It is a muzzle-loader, weighing about eight tons, and burst after firing thirty-six

GENERAL VIEW OF THE NAVAL ACADEMY, ANNAPOLIS

rounds at Charleston, in August, 1863, the fracture being plainly seen around the breech.

Trenton's great historical feature is the Revolutionary battlefield, now completely built upon. Washington, having crossed the Delaware on Christmas night, in the early morning of December 26, 1776, marched down to Trenton, and surprised and defeated the Hessians under Rahl, who were encamped north of Assunpink Creek. A fine battle-monument stands in a small park adjoining Warren Street, at the point where Washington's army, coming into town from the north, first engaged the enemy. Here Alexander Hamilton, then Captain of the New York State Company of Artillery, opened fire from his battery on the Hessians, who fled through the town, along Warren, then called King Street. The monument is a fluted Roman-Doric column, rising one hundred and thirty-five feet, surmounted by a statue of Washington, representing him standing, field-glass in hand, surveying the flying Hessians, his right arm pointing down Warren Street. The elevated top of this monument gives a grand view over the surrounding country, the course of the Delaware being traced for miles. The subsequent fortnight's campaign ending in the battle of Princeton revived the drooping spirits of the Americans, and was said by as accomplished a soldier as Frederick the Great to be among "the most brilliant in the annals of military achievements." Trenton is at the head of tidewater on the Delaware,

the stream coming down rapids, known as the "Falls." On the Pennsylvania side is Morrisville, called after Robert Morris, who lived there during the Revolution. His estate subsequently became the home of the famous French General Jean Victor Moreau, the victor at Hohenlinden, who was exiled by Napoleon in 1804. He returned to Europe afterwards at the invitation of the Czar Alexander, and devised for him a plan for invading France. They were both at the battle of Dresden in 1813, and were consulting about a certain manœuvre when a cannon ball from Napoleon's Guard broke both Moreau's legs, and he died five days afterwards.

PRINCETON BATTLE AND COLLEGE.

A few days after Washington's victory at Trenton, Cornwallis, in January, 1777, advanced across Jersey to crush the Americans, but he was repulsed at the ford of Assunpink Creek in Trenton. Then Washington resorted to a ruse. Leaving his campfires brightly burning near the creek at night to deceive the enemy, he quietly withdrew, and made a forced march ten miles northeast to Princeton, and fell upon three British regiments there, who were hastening to join Cornwallis, defeating them, and storming Nassau Hall, in which some of the fugitives had taken refuge. Trenton is in Mercer County, named in honor of General Hugh Mercer, who fell in this battle, at the head of the Philadelphia troops.

Princeton is a town of about thirty-five hundred inhabitants, a quiet place of elegant residences, in a level and luxuriant country. It is the seat of the College of New Jersey, originally founded at Elizabeth, near New York, in 1746, and transferred here in 1757. It is best known as Nassau Hall, or Princeton University, being liberally endowed, and having notable buildings surrounding its spacious campus, and is a Presbyterian foundation, which has about eleven hundred students. The original Nassau Hall erected in 1757, but burnt many years ago, was so named by the Synod "to express the honor we retain in this remote part of the globe to the immortal memory of the glorious King William the Third, who was a branch of the illustrious House of Nassau." Dr. John Witherspoon, the celebrated Scotch Presbyterian divine, who was one of the signers of the Declaration of Independence, was for thirty years its President, and among the early graduates were two other signers, Richard Stockton and Benjamin Rush. The final conflict of the battle of Princeton raged around this venerated building, and Washington presented fifty guineas to the College to repair the damage done by his bombardment. In the adjacent Presbyterian Theological Seminary have been educated many able clergymen. In Princeton Cemetery are the remains of the wonderful preacher and metaphysician, Jonathan Edwards, who became President of the College in 1758, dying shortly afterwards. A

panegyrist, describing his merits as a great Church leader, compressed all in this remarkable sentence: "These three—Augustine, Calvin and Jonathan Edwards." His son-in-law and predecessor as President was Rev. Aaron Burr; and near his humble monument is another, marking the grave of his grandson, who was an infant when the great preacher died, and whose career was in such startling contrast—the notorious Aaron Burr, Vice-President of the United States.

MARSHALL'S WALK.

The Delaware River above Trenton is for miles a stream of alternating pools and rapids, with canals on either side, passing frequent villages and displaying pleasant scenery as it breaks through the successive ridges in its approach to the mountains. Alongside the river, in Solebury, Bucks County, in the early part of the eighteenth century, was the humble home of the pioneer and hunter, Edward Marshall, who made the fateful "walk" of 1737, the injustice of which so greatly provoked the Indians, and was a chief cause of the most savage Indian War of Colonial times. All the country west of the Delaware, as far up as the mouth of the Lackawaxen River, was obtained from the Indians by the deception of this "walk." The Indians in those early times measured their distances by "days' journeys," and in various treaties with the white men transferred tracts of land by the measurement of "days' walks." William Penn

had bought the land as far up as Makefield and Wrightstown in Bucks County, and after his death his descendants, Thomas and Richard Penn, became anxious to enlarge the purchase, and this "walk" was the result. After a good deal of preliminary negotiation, several sachems of the Lenni Lenapes were brought to Philadelphia, and on August 25, 1737, made a treaty ceding additional lands beginning "on a line drawn from a certain spruce tree on the river Delaware by a west-northwest course to Neshaminy Creek; from thence back into the woods as far as a man can go in a day and a half, and bounded in the west by Neshaminy or the most westerly branch thereof, so far as the said branch doth extend, and from thence by a line to the utmost extent of the day and a half's walk, and from thence to the aforesaid river Delaware; and so down the courses of the river to the first-mentioned spruce tree." The Indians thought this "walk" might cover the land as far north as the Lehigh, but there was deliberate deception practiced. An erroneous map was exhibited indicating a line extending about as far north as Bethlehem on the Lehigh, and this deceived the Indians. The white officials had previously been quietly going over the ground far north of the Lehigh, blazing routes by marking trees, all of which was carefully concealed, and Marshall and others had been employed on these "trial walks." A reward of five hundred acres of land was promised the walkers.

Marshall and two others, Jennings and Yeates, were selected to do the walking, all young and athletic hunters, experienced in woodcraft and inured to hardships. The walk was fixed for September 19th, under charge of the Sheriff, and before sunrise of that day a large number of people gathered at the starting-point at Wrightstown, a few miles west of the Delaware. An obelisk on a pile of boulders now marks the spot at the corner of the Quaker Burying Ground, bearing an inscription, "To the Memory of the Lenni Lenape Indians, ancient owners of this region, these stones are placed at this spot, the starting-point of the 'Indian walk,' September 19, 1737." The start was made from a chestnut tree, three Indians afoot accompanying the three walkers, while the Sheriff, surveyors and others, carrying provisions, bedding and liquors, were on horseback. Just as the sun rose above the horizon at six o'clock they started. When they had gone about two miles, Jennings gave out. They halted fifteen minutes for dinner at noon, soon afterwards crossed the Lehigh near the site of Bethlehem, turned up that river, and at fifteen minutes past six in the evening, completing the day's journey of twelve hours actual travel, the Sheriff, watch in hand, called to them, as they were mounting a little hill, to "pull up." Marshall, thus notified, clasped his arms about a sapling for support, saying "he was almost gone, and if he had proceeded a few poles farther he must have fallen." Yeates seemed less

distressed. The Indians were dissatisfied from the outset, claiming the walk should have been made up the river, and not inland. When the Lehigh was crossed, early in the afternoon, they became sullen, complaining of the rapid gait of the walkers, and several times protesting against their running. Before sunset two Indians left, saying they would go no farther, that the walkers would pass all the good land, and after that it made no difference how far or where they went. The third Indian continued some distance, when he lay down to rest and could go no farther.

The halt for the night was made about a half-mile from the Indian village of Hokendauqua, a name which means "searching for land." This was the village of Lappawinzoe, one of the sachems who had made the treaty. The next morning was rainy, and messengers were sent him to request a detail of Indians to accompany the walkers. He was in ugly humor and declined, but some Indians strolled into camp and took liquor, and Yeates also drank rather freely. The horses were hunted up, and the second day's start made along the Lehigh Valley at eight o'clock, some of the Indians accompanying for a short distance through the rain, but soon leaving, dissatisfied. The route was north-northwest through the woods, Marshall carrying a compass, by which he held his course. In crossing a creek at the base of the mountains, Yeates, who had become very lame

and tired, staggered and fell, but Marshall pushed on, followed by two of the party on horseback. At two o'clock the "walk" ended on the north side of the Pocono or Broad Mountain, not far from the present site of Mauch Chunk. The distance "walked" in eighteen hours was about sixty-eight miles, a remarkable performance, considering the condition of the country. The terminus of the "walk" was marked by placing stones in the forks of five trees, and the surveyors then proceeded to complete the work by marking the line of northern limit of the tract across to the Delaware River. This was done, not by taking the shortest route to the river, but by running a line at right angles with the general direction of the "walk;" and after four days' progress, practically parallel to the Delaware, through what was then described as a "barren mountainous region," the surveyors reached the river, in the upper part of Pike County, near the mouth of Shohola Creek, just below the Lackawaxen.

The Indians were loud in their complaints of the greediness shown in this walk, and particularly of the carrying of the surveyors' line so far to the northward, which none of them had anticipated. Marshall was told by one old Indian, subsequently, "No sit down to smoke—no shoot squirrel; but lun, lun, lun, all day long." Lappawinzoe, thoroughly disgusted, said, "Next May we will go to Philadelphia, each one with a buckskin, repay the presents, and take

the lands back again." The lands, however, were sold to speculators, so this was not practicable, and when the new owners sought to occupy them, the Indians refused to vacate. This provoked disputes over a half-million acres, a vast domain. The Penns, to defend their position, afterwards repudiated the surveyors, and they never fulfilled their promise to give Marshall five hundred acres. This did not mend matters, however, and the Lenni Lenape Indians' attitude became constantly more threatening, until the scared Proprietary invited the intervention of their hereditary enemies, the Iroquois Confederation, or Six Nations. In 1742 two hundred and thirty leading Iroquois were brought to Philadelphia, and the dispute submitted to their arbitration. They sided with the Proprietary, and the Lenni Lenapes reluctantly withdrew to the Wyoming Valley, part going as far west as Ohio. But they thirsted for revenge, and when the French began attacking the frontier settlements, these Indians became willing allies, making many raids and wreaking terrible vengeance upon the innocent frontiersmen throughout Pennsylvania. Marshall, who never got his reward, removed his cabin farther up the Delaware, above the mouth of the Lehigh. The Indians always pursued him, as an arch-conspirator, for a special vengeance. They attacked his cabin, killing his wife and wounding a daughter, he escaping by being absent. They made a second attack, and killed a son.

His whole life was embittered by these murders, and he lost no opportunity for retaliation, removing, for greater safety, to an island in the river. They pursued him for forty years, a party of Indians, during the Revolution in 1777, coming all the way from Ohio to kill him, but he eluded them and escaped. His closing years, however, were passed peacefully, and he died at the age of ninety at his island home in the Delaware.

THE NARROWS AND THE FORKS.

The Tohickon Creek, the chief stream of Bucks County, flows into the Delaware at Point Pleasant, its Indian name of Tohick-hanne meaning "the stream crossed by a drift-wood bridge." Here in the river are many rapids or "rifts," some having been given curious names by the early raftsmen who used to "shoot" them—such as the "Buck Tail rift," the "Cut Bite rift," the "Man-of-War rift," the "Ground Hog rift," and the "Old Sow rift." The river makes many sweeping curves in passing through the gorges, and it displays the Nockamixon Rocks or "Pennsylvania Palisades," a series of about three miles of beetling crags, of rich red and brown sandstone, rising four hundred feet, almost perpendicularly, and making a grand gorge known as the Narrows. The ridge which the river thus bisects is known as Rock Hill in Pennsylvania, and across in New Jersey stretches away to the northeast as the

Musconetcong Mountain. Above, the Musconetcong River, the Indian "rapid runner," flows in at Reigelsville, a town on both sides of the Delaware. This was the Indian village of Pechequeolin in the early eighteenth century, where iron works, the first on the Delaware, were started in 1727, famous for making the "Franklin" and "Adam and Eve" stoves that were so popular among our ancestors, the latter bearing in bold relief a striking representation of our first parents in close consultation with the serpent. Just above, the Delaware comes out through the massive gorge of the Durham Hills or South Mountain, north of which the Lehigh River flows in from the southwest amid iron mills and slag heaps, with numerous bridges bringing the various Lehigh coal railways across from Easton to Phillipsburg. This is the confluence with the Lehigh, known in early times as the "Forks of the Delaware." To this place the Lenni Lenapes often came to treat and trade with the Penns, and a town was founded there when John Penn was the Proprietor. He was then a newly-married man, and had courted his bride, a daughter of Lord Pomfret, at her father's English country-house of Easton in Northamptonshire. So the new town was called Easton and the county Northampton, at the junction of the Delaware with the Indian Lechwiechink, signifying "where there are forks." This name was shortened to Lecha, and afterwards became the Lehigh. The two towns lit-

erally hang upon the hillsides, Mount Parnassus looking down upon Phillipsburg, named after the old chief Phillip, who had the original village there, while Easton is compressed between the South Mountain and the long ridge of Chestnut Hill, rising seven hundred feet, where the Paxinosa Inn recalls the sturdy Paxanose, the last of the Shawnee kings who lived east of the Alleghenies. Through these towns and across the bridges spanning the Delaware roll constant processions of coal trains bringing the anthracite out from the Lehigh and Wyoming coal-fields to market.

Easton dates from 1737 and has about fifteen thousand people, but its growth did not come until the coal trade was developed. The Lehigh Canal started this, and upon it Asa Packer was a boatman before the railway era, and carried goods for the industrious Frenchman, Ario Pardee, who then had a mill and store at Hazleton, back in the interior. These were the two leaders in developing the Lehigh coal trade. The chief institution of Easton is Lafayette College, a Presbyterian foundation, its main building being Pardee Hall, a gift of Ario Pardee. It is largely a school of the mine, and is devoted to that branch of scientific research. Here often came the famous Teedyuscung, the eloquent sachem of the Lenni Lenapes, who, in the councils at the "Forks," pleaded for his people's rights. The last remnant of his tribe, having been pressed far-

ther and farther towards the setting sun, now live as the "Delaware Indians" out in Oklahoma, there being barely ninety of them, where Hon. Charles Journeycake, at last advices, was the "King of the Delawares," the successor of Teedyuscung and of St. Tammany. Phillipsburg was originally settled by Dutch, and its prosperity was based chiefly on the Morris Canal, which crossed New Jersey through Newark to New York harbor, a work since abandoned for transportation purposes. It was a wonderful canal in its day, crossing mountain ranges of nine hundred feet. This was made possible by the high elevation of Lake Hopatcong, which furnished most of the water for the levels. While some of the elevations were overcome by locks, the greater ones were mounted by inclined planes up which the boats were drawn, the machinery of the planes being worked by water-power taken from the higher canal levels. Its chief usefulness now is the supply of water to Newark, the descent from Lake Hopatcong on that side being nine hundred and fourteen feet. This beautiful lake, supplied with the purest spring water, is nine miles long and about four miles wide, dotted with islands, its rock-bound shores encompassed by surrounding mountains giving charming scenery. Small steamboats navigate it, and the name Hopatcong means "Stone over the Water," referring to an artificial causeway of stone the Indians had, connecting with one of the islands, but which is now submerged.

BETHLEHEM AND THE MORAVIANS.

The Lehigh River flows out of the Alleghenies through a deep and tortuous valley which rends the mountain ridges until it strikes against the South Mountain range, here called the Durham Hills, and then turns northeast along its base to the Delaware. At this bend the Saucon Creek comes in from the south and the Monocacy Creek from the north, and here, twelve miles from Easton, is Bethlehem. This manufacturing town of twenty thousand population is one of the noted places of the Lehigh Valley. A large part of the lowlands along the river are occupied by the extensive works of the Bethlehem Steel Company, where the big guns, armor and crank-shafts are made for the navy, while on the slopes of the South Mountain are the noble buildings of the Lehigh University, the munificent benefaction of Asa Packer, supporting four hundred students of the technical studies developing mining and railways. On the hill slopes of the northern river bank is the original Moravian town, oddly built of bricks and stone, with a steep slate roof on nearly every house. It was one of the earliest and the most important of the settlements in America of the refugee followers of John Huss, the "Congregation of the United Brethren," and for a century was under its absolute government. In the winter of 1740 the first trees were cut down that formed the log hut which was the

first house on this part of the Lehigh. Count Zinzendorf, their leader, arrived from Moravia, with his young daughter Benigna, before the second house was built, and celebrated with the settlers the Christmas Eve of 1741. They had called the place Beth-Lechem, "the house upon the Lehigh," but it is related that towards midnight on this occasion Zinzendorf, becoming deeply moved, seized a blazing torch and earnestly sang a German hymn:

> "Not Jerusalem—lowly Bethlehem
> 'Twas that gave us Christ to save us."

Thus the young settlement got its name. Receiving large accessions by immigration, it soon grew into activity, and outstripping Easton, became the commercial depot of the Upper Delaware and the Lehigh, sending missionaries among the Indians, and during the Revolution was a busy manufacturing town. For the first thirty years it was a pure "commune," the church elders regulating the labor of all the people, and afterwards, until 1844, the church council of the "Congregation" ruled everything, this exclusive system being then abandoned. Proceeding up a winding highway from the river, the old "Moravian Sun Inn" is passed, the building, dating from 1758, being modernized; and mounting the higher hill above the Main Street, the visitor soon gets into the heart of the original Moravian Colony, among the ancient and spacious hip-roofed, slate-covered stone

houses, with their ponderous gables. Though dwelling in communism, the Moravians strictly separated the sexes in house, street, church and graveyard, taking good care of the lone females, whether maidens or widows. Here are the "Widows' House" and the "Single Sisters' House," quaintly attractive with their broad oaken stairways, diminutive windows, stout furniture and sun-dials, tiled and flagged pavements, low ceilings, steep roofs and odd gables. The "Sisters' House" was built in 1742. The "Congregation House" and "Theological Seminary" are also here; and, best known of all, the Moravian "Young Ladies' Seminary," an extensive and widely celebrated institution, dating from 1749, whose educational methods are those founded by the noted John Amos Commenius, who flourished in the seventeenth century, and whose life-size portrait bust is sacredly preserved in the school, as is also the old sun-dial of 1748 on the southern front of one of the buildings.

The Moravian Church, a large square building, fronts the Main Street, and here are held the great festivals at Christmas and Easter which bring many visitors to Bethlehem. Its most interesting adjunct is the "Dead House" alongside, a small pointed gothic steep-roofed building, which is used whenever a member dies. The public announcement of the death is made at sunrise from the church cupola by the "trombone choir," who go up there and vigorously blow their horns, one standing facing each of the four

points of the compass. The funeral services are held in the church, but the corpse is not taken there, it being deposited in the "Dead House," and guarded by the pall-bearers during the ceremony. This ended, a procession solemnly marches farther up the hill, led by the trombones, playing a dirge, escorting the corpse and mourners to the ancient graveyard. Here are the graves of the faithful, resting beneath grand old trees, all the men on one side of the central path and the women on the other. There are no monuments or family lots, but the graves stretch across the cemetery in long rows, each row being completed before another is begun, the latest corpse, without reference to relationship, being laid alongside the last interred, so that the row of graves shows the chronological succession of the deaths. All are treated alike, the dead bishop resting alongside the humblest of the flock, a small square stone being laid upon each flattened grave, marked with name and date of birth and death, and usually a number. Only one person—a woman—has any sign of distinction above the others in this unique cemetery. She was Deaconess Juliana Nitschman, wife of Bishop John Nitschman, who died in 1751, greatly beloved by the Congregation, and was honored by being given a special grave in the path in the centre of the yard, between the men and the women. There are some fifty graves of Indian converts in the early days, among them "Tschoop of the Mohicans,"

whom Cooper, the novelist, has immortalized, the brave and eloquent father of his hero Uncas. The record of the conversion of the famous King Teedyuscung is kept in the Moravian Congregation, and his exploits are frequently described in their annals. He lived on the meadow land down by the river, having gone there in 1730 from near Trenton, where he was born about 1700, and in 1742 he released the lands at Bethlehem to the Moravians. He was impressed by the persuasions of the preachers, and after a long probation, in 1750 was baptized under the name of Gideon. Bishop Cammerhoff, on March 12th, made an entry which, translated, reads, "To-day I baptized Tatius Kundt, the chief among sinners." He was made Grand Sachem of the Lenni Lenapes in 1754, but he backslid from the Church, and joined in the pillage and massacre of the Colonial wars. He became dissipated, but was afterwards reconciled to the whites and removed to Wyoming, where the Iroquois in 1763 made a raid, and finding him in a drunken stupor in his wigwam, they set fire to it and he was burnt to death.

During the Revolution the Moravians were of great use to the army, conducting hospitals at Bethlehem and providing supplies. In 1778 the "Single Sisters" made and presented to Count Pulaski a finely embroidered silk banner, afterwards carried by his regiment, and preserved by the Maryland Historical Society. Longfellow has beautifully enshrined this

memory in his "Hymn of the Moravian Nuns" at its consecration:

"When the dying flame of day
Through the chancel shot its ray,
Far the glimmering tapers shed
Faint light on the cowled head,
And the censer burning swung
Where before the altar hung
That proud banner, which, with prayer,
Had been consecrated there;
And the nuns' sweet hymn was heard the while
Sung low in the dim mysterious aisle—

"'Take thy banner. May it wave
Proudly o'er the good and brave,
When the battle's distant wail
Breaks the Sabbath of our vale;
When the clarion's music thrills
To the heart of these lone hills;
When the spear in conflict shakes,
And the strong lance, quivering, breaks.'"

MAUCH CHUNK AND COAL MINING.

The Lehigh above Bethlehem comes through the clear-cut "Lehigh Gap" in the Blue Ridge, which stretches off to the northeast, where are two other notches, one cut partly down and the other deeply cut—the first being the "Wind Gap" and the other the "Delaware Water Gap." The Indians used to tell the early pioneers that the wind came through the one and the water through the other. The Jordan Creek flows out from the South Mountain, and in the valley is Allentown, the chief city of the Lehigh,

having thirty thousand people, and numerous factories and breweries. Here is the township of Macungie, which is Indian for "the feeding-place of bears." It was to Allentown, when the British captured Philadelphia, that in 1777 were hastily taken the Liberty Bell and the chimes of Christ Church and St. Peter's Church, being concealed beneath the floor of old Zion Church to prevent their capture and confiscation. Above Allentown the Lehigh traverses the valley between the South Mountain and the Blue Ridge, passing Catasauqua, "the thirsty land," and Hokendauqua, seats of extensive iron manufacture, the first of these establishments on the Lehigh, founded in 1839 by David Thomas, who came out from Wales for the purpose. Then we get among the slate factories in crossing the vast slate measures that adjoin the Blue Ridge, and go quickly through the deep notch in the tall and here very narrow ridge, the waters foaming over the slaty bed, its thin layers standing up in long straight lines across the stream. Beyond is another valley, and then comes the wide-topped range known as the Broad Mountain. In this valley was Gaudenhutten, where the Indian trail, known as the "Warrior's Path," crossed the Lehigh, and where the first Moravian missionaries from Bethlehem came and built a church and converted the Indians. It was the scene of one of the terrible massacres of the Colonial wars. Within the gorge of the Broad Mountain is the oddest town on the Lehigh, Mauch Chunk.

This noted coal town has two principal streets—one laid along the front of a mountain wall above the river bank, and the other at right angles, stretching back through a cleft in the mountain. Most things are set on edge in Mauch Chunk, and the man who may have the front door of his house on the street often goes out of an upper story into the back yard, which slopes steeply upward. Mount Pisgah rises high above, crowned with the chimneys of the machine-house of an inclined-plane railway. A view from it discloses a novel landscape beneath, the railroads, canal, river and front street all being compressed together into the narrow curving gorge which bends around Bear Mountain, the "Mauch Chunk" over opposite. The red sandstone is universal, and the chocolate-colored roads leading out of town are carved into the mountain walls. Through the centre of the place the river pours over a canal dam, its roaring mingled with the noise of constantly moving coal trains. The curious conical Bear Mountain, around which everything curves, rises seven hundred feet high, and the town, which has about four thousand people, rests at various elevations, wherever houses can get room to stand—in gullies or gorges, or hanging on the hillsides. From every point of view rises the tall and quaintly turreted tower of St. Luke's Episcopal Church, looking like an ancient feudal castle of the Rhine, which was built as a memorial of Asa Packer by his widow; for here was

his home, and his grave is in the cemetery almost over the roof of his house.

At Summit Hill, nine miles northwest of Mauch Chunk, the anthracite coal of this region was first discovered. Philip Ginter, a hunter, found it while roaming over Sharp Mountain in 1791. This "stone coal" was carried down to Philadelphia and exhibited, and a company was formed, taking up ten thousand acres on the mountain and opening a mine. For thirty years they had disappointments, as nobody would use the coal, which cost about $14 per ton to transport to Philadelphia. To cheapen this, efforts were made to improve the navigation of the Lehigh, out of which grew the canal which was the early route of the coal to that city. Asa Packer once said that in 1820 three hundred and eighty-five tons went to Philadelphia, and this choked the market. In 1827, when the mining at Summit Hill had got a good start, the "Switchback" gravity railroad was built to bring the coal out from the mines to the river at Mauch Chunk. The loaded coal cars ran by their own momentum nine miles down a grade of about ninety feet to the mile. To get the cars back, they were hauled up the inclined plane on Mount Pisgah, then run by gravity six miles inland to Mount Jefferson, where they were hauled up a second plane, and then they ran three miles farther by gravity to the mines. This route was used for many years, but was afterwards superseded by another railway, and now

the famous "Switchback" is a summer excursion route for tourists who delight in the exhilarating rides down the gravity slopes. At Summit Hill and in the Panther Creek Valley, a large output of coal is mined and sent through a railway tunnel to the Lehigh, and there is at Summit Hill a burning mine which has been smouldering more than a half-century. Asa Packer developed this region, while, farther up the river, branch lines come in from the Mahanoy and Hazleton regions, which were the field of operations of Ario Pardee; and the two went hand in hand in fostering the prosperity of the Lehigh Valley.

The upper waters of the Lehigh flow through a wild canyon, the river at times almost doubling upon itself as it makes sharp bends around the bold promontories. Enormous hills encompass it about, the stream often flowing through the bottom with the rush and foam of a miniature Niagara rapids. The canal, abandoned above Mauch Chunk, was destroyed by a freshet many years ago, but the amber-colored waters still pour over the dilapidated dams and through the moss-grown sluices. There are log houses for the lumbermen, also an almost obsolete industry, and finally the railways abandon the diminutive Lehigh and climb over the desolate Nescopec Mountain, to go through the Sugar Notch and down the other side into the Vale of Wyoming and to the banks of the Susquehanna. Upon the eastern

slopes of the Nescopec the Lehigh has its sources, gathering the tribute of many small streams between this ridge and Broad Mountain.

THE VALE OF WYOMING.

The railroads cross the height of land between the sources of the Lehigh and the affluents of the Susquehanna, through the Sugar Notch, at about eighteen hundred feet elevation. When the train moves out to the western verge of Nescopec Mountain there suddenly bursts upon the gladdened sight the finest scenic view in Pennsylvania—over the fair Vale of Wyoming, with all its gorgeous beauties of towns and villages, forests and farms, under the bright sunlight, and having laid across it the distant silver streak of the glinting Susquehanna River, all spread out in a magnificent picture seen from an elevation of twelve hundred feet above the river level. For nearly twenty miles the Susquehanna can be traced through the long, trough-like valley, from where it breaks in through the Lackawannock Gap in the North Mountain, under Campbell's Ledge, far to the northward, away down south to where it passes out the narrow gorge at Nanticoke Gap. The long ridges of the Nescopec and Moosic Mountains enclose the valley on one side, and over on the other are the great North Mountain or Shawnee range, and the higher ridge of the main Allegheny range behind. In the distant northeast the view is prolonged up the

Lackawanna Valley. In this splendid Wyoming Vale, spread out like a map, is a landscape of rich agriculture, dotted over with towns and villages, coal-breakers and huge culm-piles, the long snake-like streaks of railways crossing the scene bearing their little puffing engines. It looks much like what one sees out of a balloon. Here is the village of Nanticoke, then Plymouth, then the spreading city of Wilkesbarre, and, far beyond, the foliage-hidden houses of Pittston, near the gorge where the river flows in. Between them all are clusters of villages and black coal heaps, with myriads of the little green and brown fields, making distant farms. The river reaches sparkle in the light as the long shadows are cast from the mountains, and the train runs rapidly down the mountain side and across the valley to its chief city, Wilkesbarre.

When the broad and shallow and rock-strewn river Susquehanna, on its way down from Otsego Lake in New York to the Chesapeake, breaks through the North Mountain, its valley expands to three or four miles in width, making a fertile region between the high enclosing ridges which the Indians called Maughwauwama, or the "extensive flat plains." This sonorous name underwent many changes, finally becoming known as Wyoming. Luzerne County is the lower and Lackawanna County the upper portion of this noted valley, which is the greatest anthracite coal-field in the world. These Wyoming coal meas-

ures underlie seventy-seven square miles, having veins averaging eighty feet in thickness, and about eighty thousand tons to the acre, the aggregate deposit of coal being estimated to exceed two thousand millions of tons. The large population and enormous production have caused all the railways to send in branches to tap its lucrative traffic, so that it is the best-served region in Pennsylvania. It has two large cities—Wilkesbarre, in Luzerne, and Scranton, in Lackawanna. Wilkesbarre is on the eastern Susquehanna river bank, a town of forty thousand people, named after the two English champions of American Colonial rights. It covers much surface in the centre of the valley, with suburbs spreading far up the mountain sides. But from almost every point of view in the city the outlook is over black culm-heaps or coal-breakers or at rows of coal cars, so that there is a monotony in the steady reminder of the source of their riches, the omnipresent anthracite. About twelve miles northwest of Wilkesbarre, up in the North Mountain range, is the largest lake in Pennsylvania—Harvey's Lake—elevated nearly thirteen hundred feet and covering about two square miles. It is named after one of the early pioneers from Connecticut, and its outflow comes down to the Susquehanna near Nanticoke Gap. Its pleasant shores are a favorite resort of the Wilkesbarre people. The flourishing city of Scranton is about nineteen miles north of Wilkesbarre, in the Lackawanna Val-

ley. It has grown to a population of a hundred thousand people, and is picturesquely situated among the coal mines, with a higher elevation than Wilkesbarre, being nearly eleven hundred feet above tide, at the confluence of the Roaring Brook with the Lackawanna River; and it has extensive iron industries, being the chief city of northeastern Pennsylvania. The Wyoming and Lackawanna coal pits, while the greatest anthracite producers, are not generally so deep as those of the Lehigh or Schuylkill regions. The deepest Pennsylvania shaft goes down seventeen hundred feet near Pottsville. Some of the Wyoming galleries run a mile and a half underground from the shaft, following the coal veins underneath and far beyond the Susquehanna.

This noted Wyoming Vale, in the early history of the Pennsylvania frontier, was bought from the Iroquois Indians, the "Six Nations," by an association of pioneer settlers from Connecticut. Good management, due largely to the judicious methods of the early missionaries, kept them at peace with the Indians. Count Zinzendorf, with a companion, came up from Bethlehem in 1742, before the Connecticut purchase, and founded a Moravian mission among the Shawnees in the valley. It is said that they were suspicious of European rapacity and plotted his assassination, and the historian relates that the Count was alone in his tent, reclining upon a bundle of dry weeds, destined for his bed, and

engaged in writing or in devout meditation, when the assassins crept stealthily up. A blanket-curtain formed the door, and, gently raising the corner, the Indians had a full view of the patriarch, with the calmness of a saint upon his benignant features. They were struck with awe. But this was not all. The night was cool, and he had kindled a small fire. The historian continues: "Warmed by the flame, a large rattlesnake had crept from its covert, and, approaching the fire for its greater enjoyment, glided harmlessly over one of the legs of the holy man, whose thoughts at the moment were not occupied upon the grovelling things of earth. He perceived not the serpent, but the Indians, with breathless attention, had observed the whole movement of the poisonous reptile; and as they gazed upon the aspect and attitude of the Count, their enmity was immediately changed to reverence; and in the belief that their intended victim enjoyed the special protection of the Great Spirit, they desisted from their bloody purpose and retired. Thenceforward the Count was regarded by the Indians with the most profound veneration."

When the Revolution came, the settlement was a thriving agricultural colony of about two thousand people, scattered over the valley, with a village on the river shore just above the present site of Wilkesbarre. In June, 1778, a force of British troops, Tories and Indians entered the valley and attacked

them, and on July 3d the terrible Wyoming massacre followed, in which the British officers were unable to set any bounds to the atrocious butchery by their savage allies, who killed about three hundred men, women and children. The poet Campbell has painted the previous pastoral scene of happiness and content in "Gertrude of Wyoming," and told the tale of atrocity perpetrated by the savages, which is one of the most horrible tragedies of that great war. This poem tells of

"A stoic of the woods—a man without a tear."

Beside the river below Pittston and near the village of Wyoming, having the great North Mountain for a background, was Fort Forty, the scene of the chief atrocities of the massacre, the site being now marked by a granite obelisk. Here is the burial-place of the remains of the slaughtered. "Queen Esther's Rock" is pointed out, where the half-breed Queen of the Senecas, to avenge the death of her son, is said to have herself tomahawked fourteen defenceless prisoners. Most of the survivors fled after this horror, and they did not return to the valley until long after peace was restored, when the infant settlement was renewed in the founding of Wilkesbarre. Far up on the side of the grand peak guarding the northern portal of the Lackawannock Gap is the broad shelf of rock which embalms in "Campbell's Ledge" the memory of the great English poet who has so graphically told the harrowing tale.

THE TERMINAL MORAINE.

The Delaware River above the "Forks," at the mouth of the Lehigh, breaks through a narrow notch in the Chestnut Hill ridge known as the "Little Water Gap," while farther to the northeast the ridge continues through New Jersey as the Jenny Jump Mountain. Above this is the noted "Foul Rift," where the river channel is filled with boulders and rocks of all sizes and shapes, the dread of the raftsmen who gave it the name, for many a raft has been wrecked there. But while this place is shunned by the navigator, it has an absorbing attraction for the geologist. This was where the great "Terminal Moraine" of the glacial epoch crossed the Delaware, recalling the "Ice Age," to which reference has already been made. When the vast Greenland ice-cap crept down so as to overspread northeastern America and northwestern Europe and filled the intervening Atlantic bed, it broke off many rocky fragments in its southward advance, scratching the surfaces of the ledges, and the fragments held in its grip, with striated lines and grooves in the direction of its movement. The ice steadily flowed southward, coming over mountain and valley alike in a continuous sheet, enveloping the ocean and adjacent continents, and finally halted on the Delaware about sixty miles north of Philadelphia. Its southern verge spread across America from Alaska to St.

Louis, and thence to the Atlantic on the northern coast of New Jersey. Its southern boundary entered Western Pennsylvania near Beaver, passing northeast to the New York line; then turning southeast, it crossed the Lehigh about ten miles northwest of Mauch Chunk and the Delaware just below Belvidere. It crossed New Jersey to Staten Island, traversed the length of Long Island, and passed out to sea, appearing on Block Island, Cape Cod, St. George's Bank and Sable Island Shoal, south of Nova Scotia. The boundary of the glacier west of the "Foul Rift" on the Delaware appears as a range of low gravel hills, which are piled upon the slate hills of Northampton farther west, and reach the base of the Blue Ridge three miles east of the "Wind Gap." The boundary here mounted and crossed the Kittatinny ridge sixteen hundred feet high, being well shown upon its summit, and then passed over the intervening valley to the Broad Mountain or Pocono range. The Delaware at the "Foul Rift" is elevated two hundred and fifty feet above tide; and where the glacier boundary crossed the mountains in the interior it was at about twenty-six hundred feet elevation on the highest land in Potter County, the Continental watershed.

This vast glacier was so thick as to overtop even Mount Washington, for it dropped transported boulders on the summit of that highest peak in New England. Its southern edge in Pennsylvania was at

least eight hundred feet thick in solid ice. A hundred miles back among the Catskills it was thirty-one hundred feet thick, and two hundred miles back in northern New England it was five thousand to six thousand feet thick, being still thicker farther northward. The Pocono Knob, near Stroudsburg, in Pike County, Pennsylvania, out-topped the glacier, and jutted out almost like an island surrounded by ice. The late Professor H. Carvill Lewis, who closely studied this glacier, has described how, all over the country which it covered, it dropped what is known as the "northern drift," or "till," or "hardpan," in scattered deposits of stones, clay, gravel and *débris* of all kinds, brought down from the northward as the ice moved along, and irregularly dumped upon the surface, thickly in some places and thinly in others, with many boulders, some of enormous size. It abraded all the rock surfaces crossed, and transported and rounded and striated the fragments torn off in its resistless passage. The line of farthest southern advance of the ice is shown by the "Terminal Moraine," stretching across country, which put the obstructions into the "Foul Rift." A glacier always pushes up at its foot a mound of material composed of fragments of rocks of all shapes and sizes, which the ice has taken up at various points along its flow and carried to its terminus, thus forming the moraine. This "Terminal Moraine" has been traced and carefully studied for four hundred miles across Pennsyl-

vania, showing throughout a remarkable accumulation of drift materials and boulders, heaped into irregular hills and hollows over a strip of land nearly a mile wide. The action of the Delaware River currents at the "Foul Rift" has washed out the finer materials and cobblestones, leaving only the larger boulders and rocks to perplex the navigator.

Some of the performances of this great glacier in the region adjacent to the Delaware are remarkable. It has carried huge granite boulders from the far north and planted them all along the summit of the Kittatinny where it crossed. It has torn out big pieces of limestone, some of them thirty feet long, from their beds in Monroe County, north of this range, carried them in the ice more than a thousand feet up its steep northern face and over the summit, finally dropping them on the south side in the moraine in the slate valley of Northampton. These immense limestone rocks made comparatively short journeys, but one ponderous boulder of syenite from the Adirondacks was found in Northampton, well rounded and dressed, having travelled in the ice at least two hundred miles. There has also been found a "glacial groove" upon the rocks of the Kittatinny near the Water Gap, where some ponderous fragment, imbedded in the ice, as it moved along has gouged out a great scratch six feet wide and seventy feet in length. Although this ice had evidently resistless power in its slow motion, yet it seems to have

had small influence upon the topography of the country. It appears to have merely "sand-papered" the surfaces of the rocks. It passed bodily across the sharp edges of the upright sandstone strata of the Kittatinny, yet has not had appreciable effect in cutting the ridge down, the glaciated portion east of the "Wind Gap" appearing as high and as sharply defined as the unglaciated part to the westward of the moraine. The glacier made many lakes north of the moraine, due to the "kettle holes" and obstruction of streams by unequal deposits of drift. It is inferred in the estimates of the duration of the glacier, from astronomical data, that the cold period began two hundred and eighty thousand years ago, the greatest cold being many thousand years later. The intense cold began moderating eighty thousand years ago, but the sea of ice remained long afterwards, and steadily diminished under the increasing heat. So many thousand years being required for melting, there are data inducing the belief that the ice-cap did not retreat from this part of the country back to Greenland until within ten thousand or fifteen thousand years ago. Then came the floods of water from the melting glacier, and it is significant that the Indians in the spacious valley northwest of the Kittatinny called that fertile region the "Minisink," meaning "the waters have gone," indicating their legendary memory of the floods following the melting and retreat of the glacier and the final outflow of its waters.

THE DELAWARE WATER GAP.

Belvidere, the "town of the beautiful view," nestles upon the broad terraces under the Jersey ridges at the mouth of Pequest Creek, and looks prettily out upon the high hills and distant mountains across the Delaware. Above the town, the river makes a great bend to the westward in rounding the huge and almost perpendicular mass of Manunka Chunk Mountain, a name which has been got by a process of gradual evolution from its Indian title of "Penungauchung." Here, through a gorge just above, is got the first view of the distant Water Gap, cleft down in the dark blue Kittatinny ten miles away. Approaching it as the river winds, all the views have this great Gap for the gem of the landscape, the ponderous wall of the Kittatinny stretching broadly across the horizon and steadily rising into greater prominence as it comes nearer.

> "I lift my eyes and ye are ever there,
> Wrapped in the folds of the imperial air,
> And crowned with the gold of morn or evening rare,
> O, far blue hills."

As it is gradually approached, the Gap and its enclosing ridge attain enormous proportions, dwarfing the smaller hills, among which the narrow, placid river flows below; and it is realized how tame are all the other ridges through which the Delaware has passed compared with this towering Blue Ridge,

having the low-lying Blockade Mountain just behind, and partly closing the Gap. Soon we reach the foot of the range, and, bending with the river suddenly to the left, enter the Gap. Scarcely have we entered when the river, which has been swinging to the left, bends around again gradually to the right, and in a moment we are through the gorge, the river then circling around the Blockade Mountain, which has been so named because it seems always stupidly in the way.

The Indians called the Water Gap "Pohoqualin," meaning "the river between the mountains." The Delaware flows through it with a width of eight hundred feet and at an elevation of about three hundred feet above tide. It is twenty-nine miles northeast of the Lehigh Gap where the Lehigh River passes the Blue Ridge, and there are five other gaps between them, of which the "Wind Gap," heretofore referred to, is the chief. For many years this Wind Gap provided the only route to reach the country north of the Kittatinny. About two and a half miles southwest of the Delaware is "Tat's Gap," named in memory of Moses Fonda Tatamy, an old time Indian interpreter in this region, and familiarly called "Tat's" for short. The greatest of all these passes, however, is the Water Gap, where the Blue Ridge, rent asunder, has two noble peaks guarding the portals, towering sixteen hundred feet high, and named in honor of the Indians—Mount Minsi in Pennsylva-

nia, after the tribes of the Minisink, and Mount Tammany in New Jersey, for the great chief of the Lenni Lenapes.

> "Crags, knolls and mounds, in dire confusion hurled,
> The fragmentary elements of an earlier world."

The Water Gap is a popular summer resort, there being numerous hotels and boarding-houses in eligible locations all about it, and the romantic scenery has been opened up by roads and paths leading to all the points of view. It is on such a stupendous scale, and exhibits the geological changes wrought during countless ages so well, that it always attracts the greatest interest. To the northward spread the fertile valleys of the Minisink; and the Delaware, which below the Gap flows to the southeast, passing through all the ridges, comes from the northeast above the Gap, and flows along the base of the Kittatinny for miles, as if seeking the outlet which it at length finds in this remarkable pass.

THE MINISINK.

From the elevated points of outlook at the Water Gap the observer can gaze northward over the fertile and attractive hunting-grounds of the Minsis, the land of the Minisink stretching far up the Delaware, and from the Kittatinny over to the base of the Pocono Mountain. This is the region of the "buried valleys," remarkable trough-like valleys, made during

an ancient geological period, and partially filled up by the *débris* from the great glacier. From the Hudson River in New York, southwest to the Lehigh, and just beyond the Kittatinny range, two long valleys, with an intervening ridge, stretch across the country. The Delaware River, from Port Jervis to Bushkill, flows down the northwestern of these valleys, then doubles back on itself, and breaks through the intervening ridge at the remarkable Walpack Bend into the other valley, and follows it down to the Water Gap. The northwestern valley begins at Rondout on the Hudson, crosses New York State to Port Jervis, where the Delaware, coming from the northwest, turns to the southeast into it, occupying it for thirty miles to Bushkill, and then the valley continues past Stroudsburg, just above the Water Gap, to the Lehigh River at Weissport, below Mauch Chunk. The other valley is parallel to it at the base of the Kittatinny. These valleys, underlaid by the shales as bed-rocks, have been filled up with drift by the glacier from one hundred to seven hundred feet in depth, and they constitute the famous region of the Minisink.

In this fertile district was the earliest settlement made by white men in Pennsylvania, the Dutch from the Hudson River wandering over to the Delaware at Port Jervis through these valleys, and settling on the prolific bottom lands along the river, many years before Penn came to Philadelphia. They opened cop-

per-mines in the Kittatinny, just above the Water Gap, and made the old "Mine Road" to reach them, coming from Esopus on the Hudson. The records at Albany of 1650 refer to specimens brought from "a copper-mine at the Minisink." The Provincial authorities at Philadelphia do not appear to have had any clear knowledge of settlers above the Water Gap until 1729, when they sent a surveyor up to examine and report, and he found Nicholas Depui in a snug home, where he had bought two islands and level land on the shore from the Indians some time before. Like the Dutch settlers above, Depui had no idea where the river went to. He was a French Huguenot exile from Holland, and, without disputing with the surveyor, he again bought his land, nearly six hundred and fifty acres, in 1733, from the grantees of the Penns. His stockaded stone house was known as Depui's Fort, and after him the Water Gap was long called "Depui's Gap." Old George La Bar was the most famous resident of the Water Gap. Three brothers La Bar, Peter, Charles and Abraham, also French Huguenots, lived near the Gap, and each married a Dutch wife. In 1808, however, this region became too crowded for them, and Peter, at the age of eighty-five, migrated to Ohio to get more room. When ninety-eight years old his wife died, and in his one hundredth year he married another out on the Ohio frontier, and lived to the ripe age of one hundred and five. Peter, when he mi-

grated, left his son George La Bar at the Gap, where he had been born in 1763. George was the famous centenarian of Pennsylvania, who died at the age of one hundred and seven, being a vigorous axeman almost until the day of his death. He was too young for a Revolutionary soldier, but when the War of 1812 came he was too old. In 1869, at the age of one hundred and six, a visitor describes him as felling trees and peeling with his own hands three wagon-loads of bark, which went to the tannery. He never wore spectacles, always used tobacco, voted the straight Democratic ticket, and at every Presidential election from Washington to Grant, and could not be persuaded to ride on a railway train, regarding the cars as an innovation.

In this region of the Minisink is the pleasant town of Stroudsburg, the county-seat of Monroe, its beautiful valley being well described by a local authority as "full of dimpling hills and fine orchards, among which stalwart men live to a ripe old age upon the purest apple whisky." Its finest building, the State Normal College, handsomely located on an elevated ridge, has three hundred students. The town was named for Jacob Stroud, a pioneer and Indian fighter, who was with General Wolfe when he scaled the Heights of Abraham, and, capturing Quebec, changed the map of Colonial America. Marshall's Creek comes down to join its waters with Brodhead's Creek below Stroudsburg, and a few miles above displays

the pretty little cataract of Marshall's Falls. Six miles northwest of Stroudsburg is the Pocono Knob, rising in stately grandeur as it abruptly terminates the Pocono Mountain wall on its eastern face. It was this Knob which stood out as an island in the edge of the great glacier, a deep notch separating its summit from the plateau behind, and the Terminal Moraine encircles its sides at about two-thirds its height. In the river bottom lands are fertile farms, and a great deal of tobacco is raised. Thus the river leads us to Bushkill and the great Walpack Bend. The Delaware, coming from the northeast, impinges upon the solid sandstone wall of the "Hog's Back," the prolongation of the ridge dividing the two "Buried Valleys." This ridge bristles with attenuated firs, and hence its appropriate name. The Big Bushkill and the Little Bushkill Creeks, uniting, flow in from the west, and the Delaware turns sharply eastward and then back upon itself around the ridge into the other valley, and resumes its course southwest again down to the Water Gap. This double Walpack curve, making a perfect letter "S," is so narrow and compressed that a rifleman, standing on either side, can readily send his bullet in a straight line across the river three times. The Indian word Walpack means "a turn hole." The Delaware here is a succession of rifts and pools, making a constant variation of rapids and still waters, with many spots sacred to the angler, and displaying magnificent

scenery as the lights and shadows pass across the beautiful forest-covered hills enclosing its banks.

BUSHKILL TO PORT JERVIS.

Bushkill village is in a picturesque location, opening pleasantly towards the Delaware. It is also just over the Monroe border, in Pike County, long ago described by Horace Greeley as "famous for rattlesnakes and Democrats," but now more noted for its fine waterfalls and attractive scenery, its many streams draining numerous beautiful lakes, and dancing down frequent roaring rapids in the journey to the Delaware. The falls of the Little Bushkill near the village is the finest cataract in Pennsylvania. From Bushkill, bordering the eastern bank of the Delaware, for thirty miles up to Port Jervis, is one of the best roads in the world. The Marcellus shales of the Buried Valley, which form the towering cliffs bordering the river along the base of which the road is laid, make a road-bed as smooth and hard as a floor, the chief highway of this district, for the railway has not yet penetrated it. Over on the other side of the river the great Kittatinny ridge presents an almost unbroken wall for more than forty miles from the Water Gap up to Port Jervis. Frequent creeks come in, all angling streams, the chief of them being Dingman's, which for several miles displays a series of cataracts, and at its mouth has the noted Pike County village of "Dingman's Choice," at which is

located the time-honored Dingman's Ferry, across the Delaware. The source of Dingman's Creek is in the Silver Lake, about seven miles west of the Delaware, and in its flow it descends about nine hundred feet, breaking its way over the various strata of Catskill, Chemung and Hamilton sandstones. The upper cataracts, called the Fulmer and Factory Falls and the Deer Leap, are located in a beautiful ravine known as the Childs Park, while, below, the creek pours over the High Falls, one hundred and thirty feet high, a short distance from the river. Near this is the curious Soap Trough, an inclined plane descending one hundred feet, always filled with foam, down which comes the Silver Thread, a small tributary stream. The gorge by which Dingman's Creek comes out is deep and massive, the entrance being a narrow canyon cut down into the Marcellus shales which make the towering cliffs along the river. There are also fine cataracts on the Raymondskill and the Sawkill, flowing into the Delaware above. The cliffs here rise into Utter's Peak, elevated eight hundred feet, giving a magnificent view along the valley.

The little town of Milford, the county-seat of Pike, is one of the gems of this district, spread over a broad terrace on the bluff high above the Delaware, with a grand outlook at the ponderous Kittatinny in front, rising to its greatest elevation at High Point, six miles away, where a hotel is perched on the summit. Surrounded by mountains, the late N. P.

Willis, when he visited Milford, was so impressed by its peculiar situation that he described it as "looking like a town that all the mountains around have disowned and kicked into the middle." Thomas Quick, Sr., a Hollander, who came over from the Hudson in 1733, was the first settler in Milford. His noted son, Thomas Quick, the "Indian Killer," was born in 1734. "Tom Quick," as he was called, was brought up among the Indians, and had the closest friendship for them; but when the terrible Colonial war began, the savages, in a foray, killed and scalped his father almost by his side, Tom being shot in the foot, but escaping. Tom vowed vengeance, and ever afterwards was a perfect demon in his hatred of the Indians, sparing neither age nor sex. After the French and Indian war had closed and peace was proclaimed, he carried on his own warfare independently. The most harrowing tales are told of his Indian murders, some being horribly brutal. He never married, but hunted Indians and wild beasts all his life, and was outlawed by the Government, it being announced that no Indian who killed him would be punished; but he finally died in bed in 1796. He was entirely unrepentant during his last illness, regretting he had not killed more Indians; and after saying he had killed ninety-nine during his life, he begged them to bring in an old Indian who lived in the settlement, so that he might appropriately close his career by killing the hundredth red-

skin. The most noted Milford building is "Pinchot's Castle," on the hillside above the Sawkill, a Norman-Breton baronial hall, the summer house of the Pinchot family of New York, whose ancestor, a French refugee after Waterloo, was an early settler here.

Seven miles above Milford the Delaware River makes the great right-angled bend in its course, from the southeast to the southwest, which is known as the "Tri-States Corner," and here, on the broad flats at the mouth of the Neversink River, is the town of Port Jervis. From the village of Deposit, ninety miles above, the Delaware descends in level five hundred and seventy feet; and from Port Jervis down to the Water Gap, forty-three miles, the descent is one hundred and twenty-seven feet. In the first it falls six feet per mile and in the latter only three feet, the difference being caused by the entirely changed conditions above and below the great bend. Above, the Delaware flows through the ridges by a winding ravine cut transversely across the hard rocks almost all the way, while below, it meanders parallel to the ridges along the outcrop of the softer rocks of the Marcellus shales and Clinton formations in the long, trough-like buried valleys. The Neversink comes from the northeast through one of these valleys which is prolonged over to the Hudson, the source of the Neversink being on a divide of such gentle slope that the large spring making the head sends part of its waters the other way, through

Rondout Creek into the Hudson. A long, narrow peninsula, just at the completion of the great bend, juts out between the Neversink and the Delaware, ending in a sharp, low, wedge-like rocky point, the extremity being the "Tri-States Corner," where the boundary line between New Jersey and New York reaches the Delaware, and ends in mid-river at the boundary of Pennsylvania. This spot was located after a long boundary war, and the fact is duly recorded on the "Tri-States Rock," down at the end of the point. The Delaware and Hudson Canal, constructed in 1828, and coming over from Rondout Creek through the Neversink Valley, made Port Jervis, which was named after one of its engineers. The canal goes up the Delaware to the Lackawaxen, and then follows that stream to Honesdale. The Erie Railway also comes through a gap in the Kittatinny (here called the Shawangunk Mountain, meaning the "white rocks"), descends to Port Jervis, and then follows up the Delaware. These two great public works have made the prosperity of the town, which has a population of over ten thousand. The long and towering ridge of Point Peter, forming the northwestern boundary of the Neversink Valley, and thrust out to the Delaware, bounding the gorge through which the river comes, overlooks the town. On the other side is the highest elevation of the Kittatinny and the most elevated land in New Jersey, High Point, rising nineteen hundred and sixty feet.

THE CATSKILL FLAGS.

The broadened valley of the Delaware extends a short distance above Port Jervis, the canal and railway rounding the ponderous battlements of Point Peter and then proceeding up the river, one on either bank. About three miles above the "Port," as it is familiarly called, the valley contracts to a rock-enclosed gorge, for here the Delaware emerges from its great canyon in the Catskill series of rocks, in the bottom of which it flows from Deposit, at the northern boundary of Pennsylvania, eighty-seven miles above. The remarkable change seen in the surrounding topography indicates the presence of a different rock formation from that passed below, and the river runs out of the Catskill rocks over the "Saw-mill rift." For thirty miles above, to the northern line of Pike County, at Narrowsburg, the river banks mostly are only mere shelves a few rods wide, and frequently present nothing but the faces of rocky walls, rising perpendicularly from the water to a height of six hundred feet or more. From the expanding limestones below, the valley here suddenly contracts in the flags and ledges of the Catskill series. All the small streams coming from the bluffs back of the cliffs descend with rapid fall, and frequently over high cascades. These Catskill flags, built up in vast construction, rear their gaunt and weather-beaten jagged walls and wood-crowned turrets on high.

Perched far up on the New York side, at the narrowest part of this remarkable gorge, is an eyrie called the "Hawk's Nest," which gives a wonderful view, reached by a road carved out of the rocky side of the abyss. This road, hung on the perpendicular wall five hundred feet over the river, is the only available route to the part of New York north of Port Jervis. The canal and railway, far below, are each set on a shelf cut out of the rocky banks. The enclosing cliffs rise higher as the river is ascended, sometimes reaching an elevation of twelve hundred feet; and here for miles are seen the famous Delaware and Starucca flags, rising hundreds of feet in a continuous wall of bluish-gray and greenish-gray flaggy sandstones. They are extensively quarried and shipped to New York. Both railway and canal construction through this deep cleft were enormously costly.

THE BATTLE OF LACKAWAXEN.

Here is Shohola Township, on the Pennsylvania shore, a wild and rocky region fronting on the river for about ten miles, and Shohola Creek rushes down a rocky bed through a deep gorge to seek the Delaware. It was at this place the surveyors' line was drawn from the Lehigh over to the Delaware, after Marshall's fateful walk. The "Shohola Glen," a favorite excursion ground, has the channel of the creek, only forty feet wide, cut down for two hundred feet deep into the flagstones, and it plunges over

FORT SUMTER, CHARLESTON, S. C.

four attractive cascades at the Shohola Falls above. A short distance northward the Lackawaxen flows in through a fine gorge, broadening out as the Delaware is approached; and the canal, after crossing the latter on an aqueduct, goes up the Lackawaxen bank. A grand amphitheatre of towering hills surrounds the broad flats where the Lackawaxen brings its ample flow of dark amber-colored waters out of the hemlock forests and swamps of Wayne County to this picturesque spot. Here was fought, on July 22, 1779, the battle of Lackawaxen or the Minisink, the chief Revolutionary conflict on the upper Delaware. The battlefield was a rocky ledge on the New York side, elevated about five hundred feet above the river, amid the lofty hills of Highland Township, in Sullivan County. The noted Mohawk chief, Joseph Brandt, with a force of fifteen hundred Indians and Tories, came down from Northern New York to plunder the frontier settlements. Most of the inhabitants fled down to the forts on the Lehigh or across the Blue Ridge, upon his approach; but a small militia force was hastily gathered under Colonels Hathorn and Tusten to meet the enemy, whom they found crossing the Delaware at a ford near the Lackawaxen. Hathorn, who commanded, moved to attack, but Brandt rushed his Indians up a ravine, intercepting Hathorn just as he got out on the rocky ledge, and cutting off about fifty of his rear guard. Hathorn had ninety men with him, who quickly threw up a

rude breastwork, protecting about a half-acre of the ledge. Their ammunition was scant, it was a terribly hot day, they had no water, and were soon surrounded; but for six hours they bravely defended themselves, when, the ammunition being all gone, the Indians broke through their line. Tusten was attending the wounded, and with seventeen wounded men, whom he was alleviating, was tomahawked, all being massacred. The others fled, many being slain in the pursuit. Forty-four of the little band were killed, and the fifty in the rear guard who had been cut off were never afterwards heard of. Years afterwards, the bones of the slain in this terrible defeat were gathered on the field and taken across the Blue Ridge to Goshen for interment, and in 1822 a monument was erected at Goshen in their memory, Colonel Hathorn, who was then living, making an address. On the centenary anniversary in 1879 a monument was dedicated on the field, where faint relics of the old breastwork were still traceable on the rocky ledge perched high above the river, almost opposite the mouth of the Lackawaxen.

THE SYLVANIA SOCIETY.

The county of Wayne is separated from the county of Lackawanna by the great Moosic Mountain range, the divide between two noted rivers, the Lackawaxen and the Lackawanna. The former, draining its southeastern slopes to the Delaware, was the

"Lechau-weksink" of the Indians, meaning "where the roads part," evidently referring to the parting of the Indian trails at its confluence with the Delaware; the latter, flowing out to the Susquehanna on its northwestern side, was the "Lechau-hanne," or "where the streams part," signifying the forks of two rivers. We ascend the Lackawaxen, finding the route up the gorge along the canal towpath, once the great water way of the Delaware and Hudson Company for bringing out coal, but now abandoned, as the railway route is cheaper. This canal, opened in 1828, was one hundred and seventeen miles long, and ascended from tidewater on the Hudson at Rondout to four hundred and fifty feet elevation at Port Jervis, and nine hundred and sixty-five feet at Honesdale. Its route throughout is through grand river gorges and the most magnificent scenery.

It was in this beautiful region, just south of the river, that Horace Greeley, in 1842, started what he called the "Sylvania Society," founded to demonstrate the wisdom of "the common ownership of property and the equal division of labor," which Greeley was then advocating by lectures and in his newspaper. Many eminent persons took stock in the society at $25 per share, and the experiment of co-operative farming was begun in a region of rough and rocky Pike County soil, where the amateur farmers also found amusement, for it is recorded that "the stream was alive with trout, and the surround-

ing hills were equally well provided with the largest and liveliest of rattlesnakes." They had weekly lectures and dancing parties, the colony at one time numbering three hundred persons, Mr. Greeley, who took the deepest interest, frequently visiting them. The society was a success socially and intellectually, but the labor problem soon caused trouble. A Board of Directors governed the farm and assigned the laborers their work, the principle of equality being observed by changing them from one branch of labor to another day by day. But trouble soon came, for there were too many wayward sons sent out from New York to the colony who never had worked and never intended to, but preferred going fishing. Various of the females also decidedly objected to taking their turns at the washtub. The abundance of rattlesnakes had influence, and one day a venturesome colonist brought in seventeen large rattlers, causing dire consternation. They tanned the skin of one big fellow, and made it into a pair of slippers, which were presented to Mr. Greeley on his next visit. As is usually the case, the colonists had ravenous appetites, and it was impossible to raise enough food crops to feed them, so that food had to be bought, and the capital was thus seriously drawn upon. In 1845 they had a prospect of a generous yield at the harvest, when suddenly, on July 4th, a deadly frost killed all their crops; and this ended the experimental colony. In two days everybody had left the

place, and Greeley was almost heartbroken at the failure of his cherished plans. A mortgage on the farm was foreclosed and the land sold to strangers. A Monroe County farmer, who had invested $1800 in the enterprise and lost it, became so angry at the collapse that he went to New York, as he said, "to give Horace Greeley a Monroe County Democrat's opinion of him." He found the great editor at work in the *Tribune* office, and began berating him. Greeley, as soon as a chance was given, asked his visitor how much he had lost by the failure. He replied, "Eighteen hundred dollars;" when, without further parley, Greeley drew a check for the amount and handed it to him. The farmer was so astonished and impressed by this most unexpected action that he immediately became, as he afterwards stated, "a Greeley Whig," and remained one all his life.

ASCENDING THE LACKAWAXEN.

At Glen Eyre, the Blooming Grove Creek flows merrily into the Lackawaxen, coming out from Blooming Grove Township to the southward, an elevated wooded plateau in the interior of Pike, which is the common heading ground for numerous streams radiating in every direction, and containing a score of attractive lakes. This region is a wilderness where deer, bears and other wild animals roam, while the streams are noted angling resorts. In it are the two famous "Knobs," the highest elevations of the whole

Pocono range, the southern or "High Knob" rising two thousand and ten feet, out-topping the Kittatinny "High Point." This "Knob" stands like a pyramid, at least five hundred feet above all the surrounding country, excepting its neighbor, the "North Knob," which is only one hundred feet lower. These are the northeastern outposts of the Pocono range. Upon the top of the "High Knob" is a large boulder of white conglomerate, dropped by the ice in the glacial period, and this summit gives the most extensive view in Pennsylvania, over dark, fir-covered ridges in every direction, interspersed with lakelets glistening in the sunlight. There is not a house to be seen, and scarcely a clearing, but all around is one vast wilderness. The greater part of this region is the estate of the "Blooming Grove Park Association," covering thirteen thousand acres, surrounded by a high fence, and stocked with game and fish, there being over $300,000 invested in the enterprise. Here elk and deer are bred, there are abundant hares and rabbits, and also woodcock, grouse and snipe shooting. The spacious club-house is elevated high above the rocky shores of Lake Giles, a most beautiful circular sheet of clear spring water, fourteen hundred feet above tide, and to it the anglers and hunters take their families and enjoy the pleasures of the virgin woods.

The Wallenpaupack Creek, coming out of the Pocono plateau and the Moosic Mountain, makes the

boundary between Pike and Wayne Counties, and flows into the Lackawaxen at Hawley. For most of the distance its course is deep and sluggish, but approaching the edge of the terrace, within a couple of miles of the Lackawaxen, it tumbles over cataracts and down rapids through a magnificent gorge, so that, from its alternating characteristics, the Indians rightly called it the Walink-papeek, or "the slow and swift water." It descends a cascade of seventy feet, and then goes down the Sliding Fall, a series of rapids interspersed with several small cataracts. Farther down are two cascades of thirty feet each, and then the main plunge, the Paupack falls of sixty-one feet, almost at its mouth, the whole descent being about two hundred and fifty feet. Hawley has thriving mills, whose wheels are turned by this admirable water-power, and it is also a railway centre for coal shipping. Its people are noted makers of silks, and of cut and decorated glassware. Judge James Wilson, one of the signers of the Declaration of Independence, was an early settler on the Wallenpaupack.

Above Hawley, in a broadened intervale of the Lackawaxen, was the famous "Indian Orchard," where the first settlement, made in 1760, grew afterwards into Honesdale, now the county-seat of Wayne. This was a tract of land in the valley upon which the lofty Irving Cliff looks down; and it was named from a row of one hundred apple trees which the Indians had planted at regular intervals along the river bank.

The tradition was that ninety-nine trees bore sweet fruit, while one every alternate year had a crop of sour apples. Upon a large clearing at the water's edge, paved with flat stones, the Indians held their feasts and performed their religious rites. The orchard and stones have disappeared, but the plow still turns up Indian relics. This place was selected by the Delaware and Hudson Company for the head of their now abandoned canal, at the base of the Moosic Mountain, and it was named Honesdale, in honor of the first president of the canal company, Philip Hone, described as "the courtliest Mayor New York ever saw." Within the town the two pretty streams unite which form the Lackawaxen, making lakelets on the plain, and from the shore of one of these the rocks rise almost perpendicularly nearly four hundred feet. In 1841 Washington Irving came here with some friends, making the journey on the canal, and climbed these rocks to overlook the lovely intervale, and thus the Irving Cliff was named. Writing of his visit, he spoke in wonder of the beautiful scenery and romantic route of the Delaware and Hudson Canal, saying: "For many miles it is built up along the face of perpendicular precipices, rising into stupendous cliffs, with overhanging forests, or jutting out into vast promontories, while upon the other side you look down upon the Delaware, foaming and roaring below you, at the foot of an immense wall or embankment which supports the canal. Altogether, it is one of

the most daring undertakings I have ever witnessed, to carry an artificial river over rocky mountains, and up the most savage and almost impracticable defiles. For upward of ninety miles I went through a constant succession of scenery that would have been famous had it existed in any part of Europe."

From Honesdale a gravity railroad crosses the Moosic Mountain into the Lackawanna Valley at Carbondale. This was originally used to bring the coal out for the canal, but has been abandoned for this purpose, being now confined to passenger service. It has twenty-eight inclined planes, and crosses the summit at Far View, at an elevation of nearly two thousand feet. The first locomotive brought to America, built at Stourbridge, England, in 1828, the "Stourbridge Lion," was used on the levels of this railroad, the face of a lion adorning the front of the boiler giving it the name. When brought out in 1829 the triumphant claim was made that it "would run four miles an hour." The road passes over extended mountain tops, giving far-seeing views; and among these sombre rounded ridges in the wilderness of Wayne are the sources of the Lackawaxen. Carbondale, built on the coal measures of the upper Lackawanna Valley, has about eighteen thousand population; but all its coal now goes to market by other railway routes, the gravity road and the canal being found too expensive carriers in the fierce competition of the anthracite industry.

THE HEADWATERS OF THE DELAWARE.

The Delaware, above the Lackawaxen, flows between massive cliffs in a deeply-cut gorge through the flagstones. At Mast Hope, years ago, was got the biggest pine tree ever cut on the Delaware for a vessel's mast. The "Forest Lake Association," another hunting- and fishing-club near here, has an extensive estate covering the high ridge between the Delaware and the Lackawaxen. At Big Eddy the river makes a sort of lake two miles long, of pure spring water, the widest and deepest part of the Delaware beyond tidewater. Stupendous cliffs contract the river above at the Narrows, where the village of Narrowsburg is built, and this region and the neighboring lake-strewn highlands of Sullivan County, New York, were the chief scenes of Cooper's novel, *The Last of the Mohicans*. As we advance through its upper canyon, the Delaware grows gradually smaller, but the enclosing ridges recede and leave a broad and fertile valley. Here are the villages of Damascus and Cochecton, connected by a bridge, and having together probably a thousand inhabitants. The original Indian village was Cushatunk, meaning the "lowlands," and from this Cochecton is derived. It was the sad scene of various Indian forays and massacres before and during the Revolution. For many years lumbering and tanning were great industries in this region, but they have almost entirely passed away.

We are coming to the headwaters of the Delaware. At Hancock, elevated about nine hundred feet above tide, the Delaware divides. The Popacton, or east branch, comes in, the Mohock, or western branch, however, being the larger stream, and making the boundary between Pennsylvania and New York above their junction. These two branches, after flowing nearly parallel for a long distance across Delaware County, New York, separated by a broad mountain ridge about eleven miles wide, unite around the base of a great dome-like hill at Hancock, the spot having been appropriately named by the Indians Sho-ka-kin, or "where the waters meet." Thirteen miles above is Deposit, at the New York boundary, where Oquaga Creek comes down from the mountains to the westward. This was formerly an important "place of deposit" for lumber, awaiting the spring freshets to be sent down the Delaware, and hence its name. High hills surround Deposit, the river makes a grand sweeping bend, and nearby is the beautiful mountain lake of Oquaga, of which Taylor writes: "If there is a more restful place than this, outside 'God's acres,' I have failed to find it;" adding, "The mountain road to the lake is picturesque enough to lead to Paradise." The headwaters of the Delaware rise upon the western slopes of the Catskill Mountains in Delaware and Schoharie Counties, New York. The source is about two hundred and seventy miles almost directly north of Philadel-

phia. In a depression on the western slope of the Catskill range, at an elevation of eighteen hundred and eighty-eight feet above tidewater, is the head of the Delaware, Lake Utsyanthia, a secluded little sheet of the purest and most transparent spring water. It is also called Ote-se-on-teo, meaning the "beautiful spring, cold and pure." It is a mirror of beauty in a wooded wilderness, its surroundings being most wild and picturesque. From this little lakelet flows out the Mohock, winding down its romantic valley, and receiving many brooks and rills, passing a village or two, and bubbling along for forty miles to Deposit, and thence onward as the great river Delaware to the ocean. Thus Tennyson sings of the Brook:

"I chatter, chatter, as I flow
To join the brimming river,
For man may come, and man may go,
But I go on forever."

CROSSING THE ALLEGHENIES.

IV.

CROSSING THE ALLEGHENIES.

The Old Pike—The National Road—Early Routes Across the Mountains—Old Lancaster Road—Columbia Railroad—The Pennsylvania Route—Haverford College—Villa Nova—Bryn Mawr College—Paoli—General Wayne—The Chester Valley—Pequea Valley—The Conestogas—Lancaster—Franklin and Marshall College—James Buchanan—Thaddeus Stevens—Conewago Hills—Susquehanna River—Columbia—The Underground Railroad—Middletown—Lochiel—Simon Cameron—The Clan Cameron—Harrisburg—Charles Dickens and the Camel's Back Bridge—John Harris—Lincoln's Midnight Ride—Cumberland Valley—Carlisle—Indian School—Dickinson College—The Whisky Insurrection—Tom the Tinker—Lebanon Valley—Cornwall Ore Banks—Otsego Lake—Cooperstown—James Fenimore Cooper—Richfield Springs—Cherry Valley—Sharon Springs—Howe's Cave—Binghamton—Northumberland—Williamsport—Sunbury—Fort Augusta—The Dauphin Gap—Duncannon—Duncan's Island—Juniata River—Tuscarora Gap—The Grasshopper War—Mifflin—Lewistown Narrows—Kishicoquillas Valley—Logan—Jack's Narrows—Huntingdon—The Standing Stone—Bedford—Morrison's Cove—The Sinking Spring—Brainerd, the Missionary—Tyrone—Bellefonte—Altoona—Hollidaysburg—The Portage Railroad—Blair's Gap—The Horse Shoe—Kittanning Point—Thomas Blair and Michael Maguire—Loretto—Prince Gallitzin—Ebensburg—Cresson Springs—The Conemaugh River—South Fork—Johnstown—The Great Flood—Laurel Ridge—Packsaddle Narrows—Chestnut Ridge—Kiskiminetas River—Loyalhanna Creek—Fort Ligonier—Great Bear Cave—Hannastown—General Arthur St. Clair—Greensburg—Braddock's Defeat—Pittsburg, the Iron City—Monongahela River—Allegheny River—Ohio River—Fort

Duquesne—Fort Pitt—View from Mount Washington—Pittsburg Buildings—Great Factories—Andrew Carnegie—George Westinghouse, Jr.—Allegheny Park and Monument—Coal and Coke—Davis Island Dam—Youghiogheny River—Connellsville—Natural Gas—Murrysville—Petroleum—Canonsburg—Washington—Petroleum Development—Kittanning—Modoc Oil District—Fort Venango—Oil City—Pithole City—Oil Creek—Titusville—Corry—Decadence of Oil-Fields.

THE OLD PIKE.

THE American aspiration has always been to go westward. In the early history of the Republic the Government gave great attention to the means of reaching the Western frontier, then cut off by what was regarded as the almost insurmountable barrier of the Alleghenies. General Washington was the first to project a chain of internal improvements across the mountains, by the route of the Potomac to Cumberland, then a Maryland frontier fort, and thence by roads to the headwaters of the Ohio. The initial enactment was procured by him from the Virginia Legislature in 1774, for improving the navigation of the Potomac; but the Revolutionary War interfered, and he renewed the movement afterwards in 1784, resulting in the charter of the Chesapeake and Ohio Canal, of which Washington was the first President. Little was done at that early period, however, in building the canal, but the Government constructed the famous "National Road," the first highway over the Allegheny Mountains, from Cumberland in Maryland, mainly through Southwestern Pennsylvania, to

Wheeling on the Ohio. This noted highway was finished and used throughout in 1818, and, until the railways crossed the mountains, it was the great route of travel to the West. It was familiarly known as the "Old Pike," and Thomas B. Searight has entertainingly recorded its pleasant memories, for it has now become mainly a relic of the past:

> "We hear no more of the clanging hoof,
> And the stage-coach, rattling by;
> For the steam king rules the travelled world,
> And the Old Pike's left to die."

He tells of the long lines of Conestoga wagons, each drawn by six heavy horses, their broad wheels, canvas-covered tops and huge cargoes of goods; of the swaying, rushing mail passenger coach, the fleet-footed pony express; the flocks of sheep and herds of cattle, the droves of horses and mules sent East from the "blue-grass" farms of Kentucky; and occasionally of a long line of men and women, tied two and two to a rope, driven by a slave-master from the South, to be sold in the newer region of the South-west. He describes how the famous driver, Sam Sibley, brings up his grand coach at the hotel in Uniontown with the great Henry Clay as chief passenger, and then after dinner whirls away with a rush, but unfortunately, dashing over a pile of stone in the road, the coach upsets. Out crawls the driver with a broken nose, and a crowd hastens to rescue

Mr. Clay from the upturned coach. He is unhurt, and brushing the dust from his clothes says: "This is mixing the Clay of Kentucky with the limestone of Pennsylvania." Many are the tales of the famous road. One veteran teamster relates his experience of a night at the tavern on the mountain side—thirty six-horse teams were in the wagon-yard, one hundred mules in an adjoining lot, a thousand hogs in another, as many fat cattle from the West in a field, and the tavern crowded with teamsters and drovers—the grunts of the hogs, the braying of the mules, the bellowing of the cattle and the crunching and stamping of the horses, "made music beyond a dream." In 1846 the message arrived at Cumberland at two o'clock in the morning that war was declared against Mexico, and a noted driver took the news over the mountains, past a hundred taverns and a score of villages, one hundred and thirty-one miles to Wheeling, in twelve hours. Over this famous road the Indian chief Black Hawk was brought, but the harness broke, the team ran away and the coach was smashed. Black Hawk crept out of the wreck, stood up surprised, and, wiping a drop of blood from his brow, earnestly muttered, "Ugh! Ugh! Ugh!" Barnum brought Jenny Lind over this road from Wheeling, paying $17.25 fare apiece to Baltimore. Lafayette came along it in 1825, the population all turning out to cheer him. Andrew Jackson came over it four years later to be inaugurated the first Western Presi-

dent, and subsequently also came Presidents Harrison, Polk and Taylor. What was thought of the "Old Pike" in its day of active service was well expressed at a reception to John Quincy Adams. Returning from the West, he arrived at Uniontown in May, 1837, and was warmly welcomed. Hon. Hugh Campbell, who made the reception address, said to the ex-President: "We stand here, sir, upon the Cumberland Road, which has broken down the great wall of the Appalachian Mountains. This road, we trust, constitutes an indissoluble chain of Union, connecting forever, as one, the East and the West."

In the early part of the nineteenth century, Lancaster in Pennsylvania was the largest inland city of the United States. It is sixty-nine miles from Philadelphia, and the "old Lancaster Road," the finest highway of that period, was constructed to connect them. This began the Pennsylvania route across the Alleghenies to the West, which afterwards became the most travelled. In 1834 the Pennsylvania Government opened its State work, the Columbia Railroad between the Delaware and the Susquehanna. In 1836 there were four daily lines of stages running in connection with this State railroad between Philadelphia and Pittsburg, making the journey in sixty hours. Gradually afterwards the Pennsylvania Railroad was extended across the mountains, and the Baltimore and Ohio Railroad was completed to Wheeling, and they then took away the business

from the "Old Pike" and all the other wagon or canal routes to the Ohio River.

CHESTER AND LANCASTER VALLEYS.

Let us go westward across the Alleghenies by the Pennsylvania route. East of the mountains it traverses a rich agricultural region, limestone valleys, intersected by running streams and enclosed between parallel ridges of hills, stretching, like the mountain ranges, across the country from northeast to southwest. It is a land of prolific farms and dairies, and for miles beyond Philadelphia the line is adjoined by attractive villages and many beautiful suburban villas. Three noted institutions of learning are passed—Haverford College, the great Quaker College, standing in an extensive wooded park; the Roman Catholic Augustinian College at Villa Nova, with its cross-surmounted dome and twin church spires; and the Bryn Mawr College for women, one of the most famous in the United States. This is a region first settled by Welsh Quakers, and the name Bryn Mawr is Welsh for the "great hill." It is a wealthy and extensive settlement, and its College has spacious buildings and over three hundred students. At the Commencements they all join in singing their impressive College hymn:

> "Thou Gracious Inspiration, our guiding star,
> Mistress and Mother, all hail Bryn Mawr,
> Goddess of wisdom, thy torch divine

Doth beacon thy votaries to thy shrine,
And we, thy daughters, would thy vestals be,
Thy torch to consecrate eternally."

A few miles beyond is Paoli, preserving in its name the memory of the Corsican patriot Paoli, and the birthplace of the Revolutionary General "Mad Anthony" Wayne. Here the British defeated the American patriots in September, 1777. It stands on the verge of one of the garden spots of Pennsylvania, the Chester Valley, a charming region of broad and smiling acres, bounded on the northwest by the Welsh Mountain and Mine Hill, and a veritable land of plenty. The Brandywine and Valley Creeks water it, flowing out respectively to the Delaware and the Schuylkill. Beyond the long ridge of Mine Hill is Lancaster County, another land of rich farms, with many miles of grain and tobacco fields. Mine Hill is the watershed between the Delaware and the Susquehanna, the fertile Pequea Valley being at its western base. This is a great wheat country, and from here was sent the first American grain across the Atlantic to feed Europe, the Lancaster County wheat, in the days before the railroads brought it from the West, ruling prices for the American markets. It was hauled out in the ponderous Conestoga wagons, named after the Indian tribe which formerly ruled this region—their name signifying "the great magic land." They were a quarrelsome people, fighting all the neighboring tribes, and becoming

deadly foes of the whites. Repeated wars decimated them, until in 1763 their last remnant, being hunted almost to death, took refuge in the ancient jail at Lancaster, and were cruelly massacred by the guerillas called the "Paxton Boys."

In the midst of the wheat lands and bordering the broad Conestoga Creek, flowing down to the Susquehanna at Safe Harbor, is the city of Lancaster, its red sandstone castellated jail being a conspicuous object in the view. This city was originally called Hickory Town, but in the eighteenth century its loyal people christened it Lancaster, and named the chief streets, intersecting at the Central Market Square, King and Queen Streets, with Duke Street parallel to the latter. Prior to 1812 it was the capital of Pennsylvania. Lancaster is an attractive and comfortable old city of thirty-five thousand population, with many mills and factories and large tobacco houses. It has a splendid Soldiers' Monument in the Central Square, with finely sculptured guards, representing each branch of the service, watching at the base of the magnificent shaft. Upon the outskirts are the ornate buildings of Franklin and Marshall College, a foundation of the German Reformed Church, and it also has a Theological Seminary. The charm of Lancaster, however, is Woodward Hill Cemetery, on a bold bluff, washed by the Conestoga Creek, which forms a graceful circle around its base. Upon the surface and sides of the bluff the graves

are terraced. Here is the tomb of James Buchanan, the only President sent from Pennsylvania, who died in 1868, at his home of Wheatland on the outskirts of the town. Another noted citizen of Lancaster was Thaddeus Stevens, who long represented it in Congress, and was the Republican leader in the House of Representatives during the Civil War, and afterwards until his death in 1868. He was the great champion of the emancipation of the negro race, and refused to be buried in the cemetery because negroes were excluded. Upon the grave which he selected in Lancaster are these words: "I repose in this quiet and secluded spot, not from any natural preference for solitude, but finding other cemeteries limited by charter rules as to race. I have chosen it that I might be enabled to illustrate in death the principle which I have advocated through a long life —equality of man before his Creator." When Lancaster was the chief town of the Colonial frontier in 1753, it was the place where Braddock's unfortunate expedition against Fort Duquesne at Pittsburg was organized and equipped, the work being mainly directed by Benjamin Franklin. Robert Fulton was born in Lancaster County, and he grew up and was educated at Lancaster, going afterwards to Philadelphia.

THE SUSQUEHANNA RIVER.

The line westward from Lancaster crosses one long ridge-like hill after another stretching broadly

over the country, and finally comes to the outlying ridge of the Allegheny range, the South Mountain, beyond which is the great Appalachian Valley. One railroad route boldly crosses this mountain through the depressions in the Conewago hills, where the picturesque Conewago Creek, the Indian "long reach," flows down its beautiful gorge to the Susquehanna, and this railroad finally comes out on that river at Middletown below Harrisburg; the other route follows a more easy gradient westward ten miles to Columbia, and this is used by the heavier freight trains. Coming towards it over the hills, the wide Susquehanna lies low in its broad valley, enclosed by the distant ridge of the Kittatinny bounding Cumberland County beyond the river. As it is approached, the thought is uppermost that this is one of the noblest, and yet among the meanest rivers in the country. Rising in Otsego Lake in New York, it flows over four hundred miles down to Chesapeake Bay, receives large tributaries, its West Branch being two hundred miles long, rends all the Allegheny Mountain chains, and takes a great part of the drainage of that region in New York and Pennsylvania, passes through grand valleys, noble gorges and most magnificent scenery, and yet it is so thickly sown with islands, rocks and sand-bars, rapids and shallows, as to defy all attempts to make it satisfactorily navigable excepting by lumber rafts, logs and a few canal boats. Thus the Indians significantly

gave its name meaning the island-strewn, broad and shallow river, and it is little more than a gigantic drain for Central Pennsylvania.

On its bank is Columbia, a town of busy iron and steel manufacture, as the whole range of towns are for miles up to and beyond Harrisburg. At Columbia first appeared, about 1804, that mysterious agency known as the "Underground Railroad," whereby fugitive slaves were secretly passed from one "station" to another from "Mason and Dixon's Line" to Canada, mainly through the aid and active exertions of philanthropic Quakers. All through Chester and Lancaster Counties and northward were laid the routes of this peculiar line, whose ramifications became more and more extensive as time passed, making the Fugitive Slave Law almost a nullity during the decade before the Civil War. There were hundreds of good people engaged in facilitating the unfortunate travellers who fled for freedom, and many have been the escapades with the slave-hunters, whose traffic long ago happily ended. At Middletown the Swatara River flows in from the hills of Lebanon County, there being all along the Susquehanna a prodigious development of the steel industry as well as rich farms on the fertile bottom lands. Here is the historic estate of Lochiel, which was the home of Simon Cameron, who for many years ruled the political destinies of Pennsylvania. He was born in 1799 at Maytown, near Marietta, on

the Susquehanna, a few miles above Columbia, in humble circumstances, and came as a poor printer's boy to Harrisburg, rose to wealth and power, and when he was full of years and honors placed the mantle of the United States Senatorship upon his son. Their "Clan Cameron" which ruled Pennsylvania for two generations has been regarded as the best managed political "machine" in the Union, having in its ranks and among its allies not only politicians, but bankers, railway managers, merchants, manufacturers and capitalists, and men in every walk of life, ramifying throughout the Keystone State.

Harrisburg, the capital of Pennsylvania, stands upon the sloping eastern bank of the river in the grandest scenery. Just above, the Susquehanna breaks through the Kittatinny at the Dauphin Gap, giving a superb display of the rending asunder of the towering mountain chain. Opposite are the forest-clad hills of York and Cumberland bordering the fertile Cumberland Valley spreading off to the southwest, while behind the city this great Appalachian Valley continues between its enclosing ridges as the Lebanon Valley northeast to the Schuylkill River at Reading. Market Street is the chief Harrisburg highway, and the Pennsylvania Railroad is the back border of the town. The State Capitol, set on a hill, was burnt, and is being rebuilt. A pleasant park encloses the site, and from the front a wide street leads down to the river, making a pretty view,

with a Soldiers' Monument in the centre, which is an enlarged reproduction of Cleopatra's Needle. The Front Street of the city, along the river bank, is the popular promenade, and is adorned with the Executive Mansion and other fine residences, which have a grand outlook across the broad expanse of river and islands. Bridges cross over, among them the old "camel's back," a mile long, and having its shelving stone ice-breakers jutting up stream. This is the old wooden covered bridge that Charles Dickens wrote about in his *American Notes*. On his first American visit he came into Harrisburg from York County on a stage-coach through this bridge, and he wrote: "We crossed the river by a wooden bridge, roofed and covered on all sides, and nearly a mile in length. It was profoundly dark, perplexed with great beams, crossing and re-crossing it at every possible angle, and through the broad chinks and crevices in the floor the river gleamed far down below, like a legion of eyes. We had no lamps, and as the horses stumbled and floundered through this place towards the distant speck of dying light, it seemed interminable. I really could not persuade myself at first as we rumbled heavily on, filling the bridge with hollow noises—and I held down my head to save it from the rafters—but that I was in a painful dream, and that this could not be reality." The old bridge is much the same to-day as when Dickens crossed it.

Harrisburg was named for John Harris, who es-

tablished a ferry here, and alongside the river bank is the little "Harris Park" which contains his grave. The stump of the tree at the foot of which he was buried is carefully preserved. A drunken band of Conestoga Indians came this way in 1718, and, capturing the faithful ferryman, tied him to the tree to be tortured and burnt, when the timely interposition of some Indians from the opposite shore, who knew him and were friendly, saved him. His son succeeded him and ran the ferry, and an enclosure in the park preserves this spot of historic memory.

LINCOLN'S MIDNIGHT RIDE.

It was from Harrisburg that Lincoln took the famous secret midnight ride, "in long cloak and Scotch cap," which enabled him to escape attack and possible assassination when going to be inaugurated President in 1861. Lincoln arrived in Philadelphia on his way to Washington February 21st, and had arranged to visit Harrisburg next day, address the Pennsylvania Legislature, and then proceed to Washington by way of Baltimore. In Philadelphia General Scott and Senator Seward informed him that he could not pass through Baltimore at the time announced without great peril, and detectives who had carefully examined the situation declared his life in danger. Lincoln, however, could not believe that anyone would try to assassinate him and made light of the matter. On the morning of February 22d he

raised a flag on Independence Hall in Philadelphia, and then went by railway to Harrisburg. There his friends again urged him to abandon his plan and avoid Baltimore. He visited the Legislature, and afterwards, at his hotel, met the Governor, several prominent people being present, among them Colonel Thomas A. Scott, then Vice-President of the Pennsylvania Railroad. Again the subject was discussed, and he was urged to avoid the danger threatening next day, being reminded that the railway passenger coaches were drawn through the Baltimore streets by horses, thus increasing the chances of doing him harm. He heard them patiently and answered, "What would the nation think of its President stealing into the Capital like a thief in the night?" But they only the more strenuously insisted, and finally he yielded, consenting to do whatever they thought best. Colonel Scott undertook the task, and during the early evening quietly arranged a special train to take Lincoln to Philadelphia, where he would get aboard the regular night express and be in Washington by daylight. Colonel Ward H. Lamon, a personal friend, was selected to attend Lincoln. As the party left the hotel a large crowd cheered them, and the Governor, Andrew G. Curtin, the better to conceal the intention, called out in a loud voice, "Drive us to the Executive Mansion." This was done, and when they had got away from the crowd the carriage was taken by a roundabout route to the station.

Lincoln and Lamon were not noticed by the few people there, and quietly entering the car, left for Philadelphia. As soon as they had started Scott cut every telegraph wire leading out of Harrisburg, so nothing could be transmitted excepting under his control. Lincoln got to Philadelphia without trouble, was put aboard the express at midnight, and then at dawn Scott reunited his wires and called up Washington, a group of anxious men around him. Soon the message came back, slowly ticked out from the instrument, "Plums delivered nuts safely." Scott knew what it meant; he jumped to his feet, threw up his hat and shouted, "Lincoln's in Washington." The Baltimore plotters were thus foiled, as the new President passed quietly through that city before daylight, and several hours earlier than they had expected him.

THE CUMBERLAND AND LEBANON VALLEYS.

Harrisburg stands in the centre of the great Appalachian Valley, where it is bisected by the broad Susquehanna. To the southwest it stretches away to the Potomac as the Cumberland Valley, and to the northeast it spreads across to the Schuylkill as the fertile Lebanon Valley. The high mountain wall of the Kittatinny bounds it on the northwest, with all the rivers, as heretofore described, breaking out through various "gaps." In the Colonial days, when Indian forays were frequent, the Province of Pennsylvania defended the entrances to this fertile valley

by a chain of frontier forts located at these gaps, with attendant block-houses, each post garrisoned by from twenty to eighty Provincial soldiers, as its importance demanded. Benjamin Franklin, who was then commissioned as a Colonel, was prominent in the advocacy of these frontier defences, and he personally organized the settlers and arranged the garrisons. Fort Hyndshaw began the chain on the Delaware, there were other forts on the Lehigh and Schuylkill, and Fort Henry located on the Swatara, now Lebanon, while just above Harrisburg was Fort Hunter, commanding the passage of the Susquehanna through the Dauphin Gap.

Over in the Cumberland Valley, about nineteen miles from Harrisburg, is Carlisle, a town of some nine thousand people, in a rich country, and the chief settlement of that valley. Here is located in what were formerly the army barracks, coming down from the time when this was a frontier post, the Government Indian Training School, where about eight hundred Indian boys and girls are instructed, being brought from the far western tribes to be taught the arts and methods of civilization. These Indian children are numerous in the streets and on the railway trains, with their straight hair, round swarthy faces and high cheek bones, and show the surprising influence of a civilizing education in humanizing their features and modifying their nomadic traits. They have quite a noted military or-

ganization and band at the School. Dickinson College, a foundation of the Methodist Church, is at Carlisle, having begun its work in 1783, when it was named after John Dickinson, then the President of Pennsylvania, who took great interest in it and made valuable gifts. Among its graduates were President James Buchanan and Chief Justice Roger B. Taney. Carlisle was President Washington's headquarters in 1794, during the "Whisky Insurrection" in Western Pennsylvania. After the United States Government got fairly started, the Congress in 1791 imposed a tax of seven cents per gallon on whisky. This made a great disturbance among the frontier settlers of Pennsylvania, who were largely Scotch-Irish, the population west of the Kittatinny to the Ohio River being then estimated at seventy thousand. They had no market for their grain, but they made it into whisky, which found ready sale. A horse could carry two kegs of eight gallons each on the bridle paths across the mountains, and it was worth a dollar a gallon in the east. Returning, the horseback load was usually iron worth sixteen cents a pound, or salt at five dollars a bushel. Every farmer had a still, and the whisky thus became practically the money of the people on account of its purchasing value. Opposition to the tax began in riots. A crowd of "Whisky boys" from Bedford came into Carlisle and burnt the Chief Justice in effigy, setting up a liberty pole with the words "Liberty and No Excise

on Whisky." President Washington called for troops to enforce the law, and this angered them. One John Holcroft, a ready writer, appeared, and wrote sharp articles against the law and the army, over the signature of "Tom the Tinker." These were printed in handbills, and the historian says "half the trees in Western Pennsylvania were whitened with Tom the Tinker's notices." Officials sent to collect the tax were roughly treated, farmers who paid it were beaten by masked men, and one man who rented his house to a tax collector was captured at midnight by a crowd of disguised vigilants, who carried him into the woods, sheared his hair, tarred, feathered and tied him to a tree.

Soon there were gathered at Carlisle an army of thirteen thousand men from Pennsylvania, New Jersey, Maryland and Virginia, under Governor Henry Lee of Virginia. President Washington and Secretary of the Treasury Alexander Hamilton came to Carlisle, and accompanied the troops, in October, 1794, on their march across the mountains to Bedford. The Governors of New Jersey and Pennsylvania led the troops of their respective States, and in the army were many Revolutionary veterans. As they advanced they found Tom the Tinker's notices on the trees, of which the following is a specimen:

"Brethren, you must not think to frighten us with fine arranged bits of infantry, cavalry and artillery, composed of your watermelon armies taken from the

Jersey shores. They would cut a much better figure in warring with crabs and oysters about the banks of the Delaware. It is a common thing for Indians to fight your best armies in the proportion of one to five; therefore we would not hesitate to attack this army at the rate of one to ten."

The soldiers riddled these notices with bullets and pressed on, hunting for "Tom Tinker's men," as the insurgents came to be called. But they never seemed able to find them. All the people seen told how they were forced by threats, and when asked where the persons were who threatened them, replied, "Oh, they have run off." The army finally reached Pittsburg, the people submitted to the law and paid the tax, the insurrection was suppressed, and the army returned and was disbanded. The whisky excise was peacefully collected afterwards until the tax was repealed.

In the Lebanon Valley east of Harrisburg are important iron furnaces, and here are the "Cornwall Ore Banks," which is one of the greatest iron-ore deposits in the world—less rich than some others, possibly, but having a practically exhaustless supply almost alongside these furnaces. There are three hills of solid iron ore, one of them having been worked long before the Revolution, the original furnace, still existing, dating from 1742. This great Cornwall iron mine was bought in 1737 for $675, including a large tract of land. A half-century later

$42,500 was paid for a one-sixth interest, and to-day a one-forty-eighth interest is estimated worth upwards of $500,000. These ores have some sulphur in them, and are therefore baked in ovens to remove it. They yield about 50 per cent. of iron. A geologist some time ago reported upon the ore banks that there were thirty millions of tons of ore in sight above the water-level, being over three times the amount taken out since the workings began in the eighteenth century. The deposits extend to a depth of several hundred feet under the surface, thus indefinitely multiplying the prospective yield.

THE SUSQUEHANNA HEADWATERS.

Otsego Lake, the source of the Susquehanna River, is one of the prettiest lakes in New York State, and is at an elevation of eleven hundred feet above tide. It is nine miles long and about a mile wide, the Susquehanna issuing from its southern end at Cooperstown, a hamlet of two thousand people, beautifully situated amid the high rolling hills surrounding the lake. The name of the lake comes from the "Ote-sa-ga rock" at the outlet, a small, round-topped, beehive-shaped boulder a few rods from the shore, just where the lake condenses into the river. This was the Indian Council rock, to which they came to hold meetings and make treaties, and it was well-known among the Iroquois and the Lenni Lenapes. James Fenimore Cooper, the nov-

elist, who has immortalized all this region, called the lake the "Glimmerglass." His father, Judge William Cooper, founded the village of Cooperstown in 1786, afterwards bringing his infant son from Burlington, New Jersey, where he was born in 1789. Here the great American novelist lived until his death in 1851, his grave, under a plain horizontal slab, being in the little churchyard of Christ Episcopal Church. There is a monument to him in Lakewood Cemetery, about a mile distant, surmounted by a statue of his legendary hunter "Leatherstocking," who has been described as "a man who had the simplicity of a woodsman, the heroism of a savage, the faith of a Christian, and the feeling of a poet." The old Cooper mansion, his home, Otsego Hall, was burnt in 1854, and its site is marked by a rock in the middle of the road, surrounded by a railing. "Hannah's Hill," named after his daughter, and commanding a magnificent view, which he always described with rapture, is on the western shore of the lake, just out of town. The charm of Cooper's genius and the magic of his description have given Otsego Lake a world-wide fame. In one place he described it as "a broad sheet of water, so placid and limpid that it resembled a bed of the pure mountain atmosphere compressed into a setting of hills and woods. Nothing is wanted but ruined castles and recollections, to raise it to the level of the scenery of the Rhine." And thus has the poet sung of it:

"O Haunted Lake, from out whose silver fountains
The mighty Susquehanna takes its rise ;
O Haunted Lake, among the pine-clad mountains,
Forever smiling upward to the skies,—
A master's hand hath painted all thy beauties ;
A master's mind hath peopled all thy shore
With wraiths of mighty hunters and fair maidens,
Haunting thy forest-glades forevermore."

All around Otsego Lake and its neighborhood are the scenes which Cooper has interwoven into his novel, *The Deer-Slayer*. About seven miles northwest are the well-known Richfield Springs (magnesia and sulphur), near Candarago Lake. This Indian name, meaning "on the lake," has recently been revived to supersede the old title of Schuyler's Lake for this beautiful sheet of water, enbosomed in green and sloping hills, which is the chief scenic charm of Richfield. To the eastward from Otsego Lake is the romantic Cherry Valley, another attractive summer resort, and the scene of a sad Indian massacre in 1778, the site of the old fort that was then captured being still exhibited, with the graves of the murdered villagers, to whom a monument has been erected. A few miles farther, in a narrow upland wooded valley surrounded by high hills, are the Sharon Springs (sulphur and chalybeate), which in earlier times were so popular with our German citizens, who were attracted by the resemblance to the Fatherland, that the place was called the "Baden-Baden of America." The name of Sharon came from Sharon in Connecti-

cut, and the spring water is discharged with a crust of white and flocculent sulphur into a stream not inappropriately called the Brimstone Brook. In this valley, east of the springs, one of the last Revolutionary battles was fought, Colonel Willett's American force in 1781 routing a detachment of Tories and Indians with severe loss. There are grottoes in the neighborhood abounding in stalactites and beautiful crystals of sulphate of lime. Not far away is the noted Howe's Cave, an immense cavern, said to extend for eleven miles underground, being an old water-channel in the lower Helderberg limestone, and which has many visitors, attracted by its fine display of stalactites and grand rock chambers, with the usual subterranean lake and stream. All this region was originally settled by Germans from the Palatinate.

The Susquehanna, steadily gaining in volume, flows in wayward course down rapids and around many bends to Binghamton, near the southern border of New York, where it receives the Chenango River, and its elevation has declined to eight hundred and sixty feet. This is a busy manufacturing city and railway junction, having forty thousand inhabitants. The first settlers came in 1787, and William Bingham of Philadelphia owning the land at the confluence of the rivers, the town was afterwards named for him. The Chenango Canal connects the Susquehanna waters from here with the Erie Canal, about

ninety miles northward, at Utica, the Indian word Chenango meaning "the bull thistle." Entering Pennsylvania, the Susquehanna now flows many miles past mountain and village, around great bends and breaking through the Allegheny ridges, passes along the Wyoming Valley, already described, and finally going out through the Nanticoke Gap, reaches Northumberland, where it receives its chief tributary, the West Branch. This great stream comes for two hundred miles from the westward through the Allegheny ranges, passing Lewisburg, the seat of the Baptist University of Lewisburg, Milton, and the noted lumber town of Williamsport, famous for its great log boom. This arrangement for collecting logs cost a million dollars, and extends about four miles up the river above the town, with its massive piers and braces, and will hold three hundred millions of feet of lumber. The river front is lined with basins and sawmills. In earlier years this boom has been so filled with pine and hemlock logs in the spring that the river could almost anywhere be crossed on a solid floor of timber. Unfortunately, however, the vast forests on the slopes of the Alleghenies have been so generally cut off that the trade has seriously declined. At Northumberland lived Dr. Joseph Priestley, the discoverer of oxygen gas, who died there in 1804, and is buried in the cemetery.

The Susquehanna now becomes a broad river, and just below flows past Sunbury, the railway outlet of

the extensive Shamokin coal district. This town was originally Fort Augusta, built in 1756 to guard the Susquehanna frontier just below the junction of its two branches. In the French and Indian War it had usually a garrison of a regiment, and it was then regarded as the best defensive work in Pennsylvania. After that war it gradually fell into decay, although during the Revolution it was always a refuge for the Susquehanna frontier settlers fleeing from Indian brutality and massacre. Many prominent officers of the Revolutionary army received their military training at this fort. The settlement was originally called Shamokin, from the Indian name of the creek here falling into the Susquehanna —Schakamo-kink, meaning, like Shackamaxon, "the place of eels." For fifty miles below Sunbury the broad Susquehanna winds among the mountain ranges, traversing one after another, until its channel is narrowed to pass through the great Dauphin Gap in the Kittatinny, five miles above Harrisburg, where the river bed has descended to an elevation of three hundred and twenty feet above tide.

THE BEAUTIFUL BLUE JUNIATA.

A long, low bridge carries the Pennsylvania Railroad across the river in front of Dauphin Gap, and a short distance above, in a delta of fertile islands, the Susquehanna receives its romantic tributary, the Juniata, flowing for a hundred miles from the heart

of the Alleghenies, and breaking out of them through a notch cut down in the long ridge of the Tuscarora Mountain. Here is the iron-making town of Duncannon, settled by the sturdy Scotch-Irish, who were numerous along the Juniata and in its neighboring valleys, and who suffered greatly from Indian forays in the early days of the frontier. Upon Duncan's Island, the chief one in the delta, at the mouth of the Juniata, was the place of the council-fire of the Indian tribes of all this region. Now, this island is mainly a pleasure-ground, having spacious and shady groves, while the canal, crossing it from the Susquehanna to the Juniata, goes directly through an extensive Indian mound and burial-place. We will enter the fastnesses of the Alleghenies by the winding gorge of the "beautiful blue Juniata," flowing through magnificent scenery from the eastern face of the main Allegheny range out to the great river. It breaks down ridge after ridge, stretching broadly across the country, and presents superb landscapes and impressive mountain views. The route is a series of bends and gorges, the river crossing successive valleys between the ridges, now running for miles northeast along the base of a towering mountain and then turning east or southeast to break through it by a romantic pass. The glens and mountains, with ever-changing views, give an almost endless panorama. Softness of outline, massiveness and variety, are the peculiarities of Juniata scenery. The

stream is small, not carrying a great amount of water in ordinary seasons, and it seems as much by strategy as by power to have overcome the obstacles and made its mountain passes. The rended mountains, steep tree-covered slopes and frequent isolated sentinel-like hills rising from the glens, have all been moulded into rounded forms by the action of the elements, leaving few abrupt precipices or naked rocks to mar the regularity of the natural beauties. The valleys and lower parts of the mountain sides are generally cultivated, the fields sloping up to the mantle of forest crowning the flanks and summits of the ridges. Every change of sunshine or shadow, and the steady progress of the seasons, give new tints to these glens and mountains. At times the ravines are deep and the river tortuous, and again it meanders across the rich flat bottom lands of a broad valley. In its winding course among these mountain ranges, this renowned river passes through and displays almost the whole geological formation of Pennsylvania. The primary rocks are to the eastward of the Susquehanna, and the bituminous coal measures begin on the western Allegheny slope, so that the river cuts into a rock stratification over six miles in thickness, as one after another formation comes to the surface.

We go through the narrow Tuscarora Gap, and are journeying over the lands of the Tuscaroras, one of the Iroquois Six Nations, who came up from the South, and were given the name of Tuscarora, or the

"shirt-wearer," because long contact with the whites had led them to adopt that garment. Beyond the Gap, the Tuscarora Valley is enclosed on its north-west side by the Turkey Mountain, the next western ridge, and it was a region of terrible Indian conflicts and massacres in the pioneer days, when the first fort built there was burnt, and every settler either killed or carried off into captivity. Here was fought the "Grasshopper War" between the Tuscaroras and Delawares. They had villages on opposite sides of the river, and one day the children disputed about some grasshoppers. The quarrel involved first the squaws and then the men, a bloody battle following. Mifflin, an attractive town, is located here, and to the westward the Juniata breaks through the next great ridge crossing its path, passing a massive gorge formed by the Shade and Blue Mountains, flowing for miles in the deep and narrow winding canyon between them, the far-famed "Lewistown or Long Narrows," having the railway hanging upon one bank and the canal upon the other. Broken, slaty shingle covers most of the hill-slopes, and in the broad valley, above the lengthened gorge, is Lewistown, nestling at the base of a huge mountain at the outlet of the beautiful Kishicoquillas Valley, spreading up among the high hills to the northward—its name meaning "the snakes are already in their dens." The hero of this attractive region in the eighteenth century, and then its most distinguished inhabitant,

was Logan, the chief of the Mingoes and Cayugas, whose speeches, preserved by Thomas Jefferson, are a favorite in school declamation. He was of giant mould, nearly seven feet high, and lived at Logan's Spring in the valley. He was the friend of the white men, but when the frontier became too well settled for him longer to find the deer on which he subsisted, selling their skins to the traders, he went westward to the Ohio River, locating near Wheeling. Here, without provocation, his family were cruelly massacred, and this ended Logan's love for the whites. He became a relentless foe, wreaking indiscriminate vengeance, until killed in the Shawnee wars beyond the Ohio, having joined that hostile tribe. The Lewistown Narrows are the finest mountain pass of the Juniata, the peaks precipitously rising over a thousand feet above the river, which forces a passage between them for more than eight miles, the densely wooded cliffs so enclosing and overshadowing the gorge as to give it an appearance of deepest gloom.

THE STANDING STONE AND SINKING SPRING.

Westward beyond the valley rises the next ridge pierced by the Juniata in its outflow, Jack's Mountain, and its gorge is known as "Jack's Narrows." Here penetrated Captain Jack Armstrong in the early colonial days, a hunter and Indian trader, whose cabin was burnt and wife and children massacred,

making him always afterwards an avenging Nemesis, roving along the Juniata Valley and killing Indians indiscriminately. Jack's Narrows is a pass even more contracted than that below Lewistown, and a profusion of shingle and broken stone covers its mountain sides, the deranged limestone strata in places standing almost upright. Mount Union is in the valley east of this pass, and beyond it is the chief town of the Juniata, Huntingdon, which has about eight thousand people. This was the oldest settlement on the river, ninety-seven miles west of Harrisburg, the ancient "Standing Stone," where the Indians of the valley for centuries met to hold their councils. The earliest white settlers came in 1754. The original Standing Stone of Huntingdon, erected by the Indians, was a granite column, about fourteen feet high and six inches square, covered with strange characters, which were the sacred records of the Oneidas. Once the Tuscaroras stole it, but the Oneidas followed, and, fighting for their sacred treasure, recaptured it. When the whites came along, the Oneidas, who had joined the French, went west, carrying the stone with them. Afterwards, a second stone, much like the first, was set up, and a fragment of it is now preserved at Huntingdon. Here was built a large fort anterior to the Revolution, which was a refuge for the frontier settlers. The "Standing Stone" is engraved as an appropriate symbol on the city seal of Huntingdon, being sur-

rounded by a representation of mountains, and the name of "Oneida" (the granite) is preserved in a township across the river. Selina, the Countess of Huntingdon, who was a benefactor of the University of Pennsylvania, had her titled name given the city. The then University Provost, Dr. William Smith, became owner of the town site, and thus remembered her generosity. About fifty miles southwest of Huntingdon, amid the mountains, is Bedford, noted for its chalybeate and sulphur springs, discovered in 1804, which have long been a favorite resort of Pennsylvanians on account of their healing waters. The whole country thereabout is filled with semi-bituminous coal measures, furnishing a lucrative traffic.

Diminishing in volume, our attractive Juniata flows through a rough country above Huntingdon, after threading the pass in the lofty Warrior Ridge. Extending off to the southwestward is Morrison's Cove, a rich valley under the shadow of the long mountain ridge, which was settled in 1755 by the Dunkards. These singular people, among whose cardinal doctrines are peace and non-resistance, were attacked by the Indians in 1777, who entered the valley and almost exterminated the settlement. Most of them bowed submissively to the stroke of death, gently saying "Gottes wille sei gethan" (God's will be done). One, however, resisted, killed two Indians and escaped; but afterwards returning, the Dunkard Church tried him for this breach of faith,

and he was excommunicated. In this region is the Sinking Spring, a strange water course originally appearing in a limestone cave, where it comes out of an arched opening, with sufficient water to turn a large mill; but it soon disappears underground, the concealed current being heard through fissures, bubbling far below. Then it returns to the surface, flowing some distance, enters another cave, passing under Cave Mountain, and finally reappears and falls into the Juniata, making, in its peculiar waywardness, as remarkable a stream as can anywhere be found. Here our famous Juniata River, dwindled to a little creek, comes down the mountain side, and we penetrate farther by following up the Little Juniata. It has brought us, through the great ridges, into the heart of the Appalachian region, to the eastern base of the main Allegheny Mountain, on the flanks of which are its sources. It has displayed to us a noted valley, full of the story of early Colonial contests, massacres and perils, the scenes of the fearless missionary labors of Brainerd the Puritan and Loskiel the Moravian. Brainerd recognized the pagan idolatry of the Indians, and did not hesitate to take the Bible to their solemn religious festivals and expound its divine principles, to spoil the incantations and frustrate the charms of their medicine men. Once a Nanticoke pontiff got into a hot argument with Brainerd, saying God had taught him religion and he would never turn from it; that he would not be-

lieve in the Devil; and he added that the souls of the dead passed to the South, where the good lived in a fair city, while the evil hovered forever in outer darkness. Many are the romances of the attractive Juniata:

"Gay was the mountain song
Of bright Alfarata,
Where sweep the waters of
The blue Juniata:
'Strong and true my arrows are,
In my painted quiver,
Swift goes my light canoe
Adown the rapid river.'"

CROSSING THE MOUNTAIN TOP.

At the eastern base of the main Allegheny range a long mountain valley stretches broadly from the far northeast to the southwest, and here is Tyrone, a settlement of extensive iron works, and the outlet of the greatest bituminous coal-fields of Central Pennsylvania, the Clearfield district, the town of Clearfield being about forty miles to the northwest. Northeast of Tyrone, this valley is called the Bald Eagle Valley, a picturesque and fertile region; and to the southwest it is the Tuckahoe Valley. At the base of the Bald Eagle Mountain, thirty-three miles from Tyrone, is the town of Bellefonte, another iron region, handling the products of the Bald Eagle and Nittany Valleys, and receiving its name from the "Beautiful Fount" which supplies the town with water. This is one of the most remarkable springs

HOME OF WASHINGTON, MOUNT VERNON

in the Alleghenies, pouring out two hundred and eighty thousand gallons of the purest water every minute. Following the Tuckahoe Valley southward, at the base of the main Allegheny range we come to the Pennsylvania Railroad town of Altoona, and eight miles farther to Hollidaysburg. Each is a representative town—Hollidaysburg of the past methods of crossing the mountain top, and Altoona of the present.

In 1836 Mr. David Stephenson, the famous British railway engineer, made a journey across Pennsylvania by the methods then in vogue, and wrote that he travelled from Philadelphia to Pittsburg, three hundred and ninety-five miles by the route taken, in ninety-one hours, at a cost of three pounds sterling, about four cents a mile, and that one hundred and eighteen miles of the journey, which he calls "extraordinary," were by railroads, and two hundred and seventy-seven miles by canals. This was the line used for twenty years, a main route of travel from the seaboard to the West, having been put into operation in 1834. It followed the Columbia Railroad from Philadelphia to Columbia on the Susquehanna, the canal up the Susquehanna and Juniata Rivers to Hollidaysburg, a portage railroad by inclined planes over the main Allegheny Mountain ridge to Johnstown, and the canal again, down the Conemaugh and Allegheny Rivers to Pittsburg. There were one hundred and seventy-two miles of canal from Colum-

bia to Hollidaysburg, which went through more than a hundred locks and crossed thirty-three aqueducts, having risen about six hundred feet above the level at Columbia when it reached the eastern face of the mountain. The canal west of Johnstown was one hundred and five miles long, descended sixty-four locks, and went through a tunnel of one thousand feet. The Portage Railroad of thirty-six miles crossed the mountain by Blair's Gap, above Hollidaysburg, at twenty-three hundred and twenty-six feet elevation, through a tunnel nine hundred feet long. There were ten inclined planes, five on each side. The steepest side of the Allegheny Mountain being its eastern face, the railway from Hollidaysburg to the summit, though only ten miles long, ascended fourteen hundred feet, while twenty miles of railway on the western side descended eleven hundred and seventy-two feet. The cars hauled up the planes each carried three tons of freight, and three cars were hauled at a single draft. There could be twenty-four cars carrying seventy-two tons passed over in one hour, which was ample for the traffic at that time, the average business being three hundred tons of freight a day. This amount would be carried in less than ten of the big cars of to-day. It took passengers eight hours to go over the mountain, halting one hour on the summit for dinner.

This route was superseded by the Pennsylvania Railroad crossing above Altoona, opened in 1854, a

road made for ordinary trains; and then Hollidaysburg became a town of iron manufacture, losing the bustle and business of the Portage, which was abandoned. The railroad company acquired a large tract of land between the main Allegheny range and the Brush Mountain to the southward, which has a deep notch, called the "Kettle," cut down into it, opening a distant prospect of gray mountain ridges behind. Here has been established the most completely representative railway city in the world, having enormous railway shops, a gigantic establishment, and a population of thirty-five thousand, almost all in one way or another dependent on the Pennsylvania Railroad. Altoona is at an elevation of about eleven hundred feet above tide, and the railway climbs to the summit of the mountain by a grade of ninety feet to the mile, winding around an indented valley to get the necessary elevation. At its head this valley divides into two smaller glens, with a towering crag rising between them. Having ascended the northern side, the railway curves around, crossing the smaller glens upon high embankments, doubling upon itself, and mounting steadily higher by running up the opposite side of the valley to the outer edge of the ridge. This sweeping curve gives striking scenic effects, and is the noted Pennsylvania "Horse Shoe," and the huge crag between the smaller glens, in which the head of the Horse Shoe curve is partly hewn, is Kittanning Point. This means the "great

stream," two creeks issuing out of the glens uniting below it; and here was the route, at sixteen hundred feet elevation, of the ancient Indian trail across the mountain, the "Kittanning Path," in their portage between the Juniata and Ohio waters. It shows how closely the modern railroad builder has followed the route set for him by the original road-makers among the red men. The Pennsylvania Railroad carries four tracks over the mountain, piercing the summit by two tunnels at about twenty-two hundred feet elevation, with two tracks in each. The mountain rises much higher, and has coal mines, coke ovens and miners' cabins on the very top. This is the watershed dividing the Atlantic waters from those of the Mississippi, flowing to the Gulf, and Gallitzin, a flourishing mining village, is the summit station of the railway.

GOING DOWN THE CONEMAUGH.

In the latter part of the eighteenth century there were but two white men living in all this region. The first one there was Thomas Blair, whose cabin was on the mountain at Blair's Gap, where the Portage Railroad afterwards came over. The other was Michael Maguire, who came along in 1790, and going through the Gap, concluded to settle among the Indians about twelve miles away, at what was afterwards Loretto. These rugged pioneers spent most of their time fighting and watching the Indians

and wild beasts, and gathered a few companions around them. Here afterwards came Prince Demetrius Augustine Gallitzin, who left the Russian army in 1792 and visited America, designing to travel. He became a Catholic priest, and liking these mountains, established a mission at Loretto in 1798, spending a fortune in maintaining it, his missionary charge ultimately extending over the whole mountain region. He attracted a population of about three thousand, chiefly Germans and Irish, repeatedly refused the episcopacy, and continued his labors until his death at Loretto in 1840. His remains lie in front of his church, surmounted by a monument, while the centenary of this St. Michael's Church of Loretto was marked in October, 1899, by erecting his bronze statue, the Prelate-Prince Gallitzin being portrayed as he appeared in the Allegheny wilderness, wearing cassock, surplice and a skull-cap in lieu of the beretta, this being his usual head-gear at service. Loretto, named after the city on the Adriatic, was the first nucleus of population in this elevated district, and is about five miles north of the railway. Loretto was the first settlement in this region, but afterwards the coal and iron attracted the Welsh, who came in numbers, and founded the town of Ebensburg, about eleven miles from the railway. They gave their familiar name of Cambria to the county. Here on the mountain side, at an elevation of over two thousand feet, are the Cresson Springs,

a noted health resort, with a half-dozen medicinal springs, the chief being an astringent chalybeate and a strong alum.

The route west of the mountain is down the valley of the Conemaugh, in a district underlaid with coal, and having at every village evidence of this industry. The Conemaugh is "the other stream" of the Indians, and winding down its tortuous valley, with coal and iron all about, the railway comes to the settlement of Conemaugh, which spreads into the larger town of Johnstown, the seat of the great Cambria Steel Works. The Conemaugh Valley is a deep canyon, and Conemaugh village was the western terminus of the mountain portage, where the canal began. A little flat space about a mile beyond, at the junction of Stony Creek, was in early times an Indian village, then known from its sachem as "Kickenapawling's Old Town." When the white men ventured over the mountain, there came among them a hardy German pioneer named Joseph Jahns, who built a log cabin on the flat in 1791, and from him the cluster of little houses that grew afterwards became known as Jahnstown. Then came the Welsh miners and iron-workers, and they set up charcoal furnaces, and soon changed the name to Johnstown. From this humble beginning grew the largest iron and steel establishment in Pennsylvania. Its ores, coal and limestone were originally all dug out of the neighboring ridges, though now it uses Lake Supe-

rior ores. The Conemaugh Valley is here enclosed by high hills, and in the centre of the town the railroad is carried across the river on a solid stone bridge with low arches.

This region, on May 31, 1889, was the scene of one of the most appalling disasters of modern times. A deluge of rain for the greater part of two days had fallen upon the Alleghenies, and made great freshets in both the Juniata and the Conemaugh. On the South Fork of the Conemaugh, fifteen miles above Johnstown, is Conemaugh Lake, a reservoir there formed by damming the stream, so that it covered a surface of five hundred acres—the dam, a thousand feet long, being in places one hundred feet high. This had been made as a fishing-ground by a club of Pittsburg anglers. The excessive rains filled the lake, and the weakened dam burst, its twenty millions of tons of waters rushing down the already swollen Conemaugh in a mass a half-mile wide stretching across the valley and forty to fifty feet high, carrying everything before it. The lake level was about three hundred feet higher than Johnstown, and every village, tree, house, and the whole railway, with much of the soil and rocks, were carried before the resistless flood to Johnstown, where the mass was stopped by and piled up behind the stone railway bridge, and there caught fire, the resistless flood, to get out, sweeping away nearly the whole town in the valley bottom. This vast calamity destroyed from three to five thou

sand lives, for no accurate estimate could be ever made, and ten millions of property. It took the flood about seven minutes of actual time to pass over the fifteen miles between the lake and Johnstown, and there was left, after it had passed, a wide bed, like a great Alpine glacial *moraine*, filled with ponderous masses of sand and stones and wreckage of every description, the resistless torrent being afterwards reduced to a little stream of running water. It required many months to recover from this appalling destruction; but the people went to work with a will and rebuilt the town, the steel works and the railway, which for a dozen miles down the valley had been completely obliterated. This terrible disaster excited universal sympathy, and a relief fund amounting to nearly $3,000,000 was contributed from all parts of the world.

LIGONIER AND HANNASTOWN.

The whole mountain district west of Johnstown is filled with coal mines, coke ovens and iron furnaces, this being the "Pittsburg Coal District." The Conemaugh breaks through the next western ridge, the Laurel Mountain, and the broadening river winds along its deep valley between high wooded hills. It is a veritable "Black Country," and ten miles beyond, the river passes the finest mountain gorge on the western slope of the Alleghenies, the deep and winding canyon of the Packsaddle Narrows, by which the Conemaugh breaks out of the Chestnut Ridge, the

western border of the Allegheny ranges. For two hundred miles the railroad has gone through or over range after range, and this grand pass, encompassed by mountains rising twelve hundred feet above the bottom of the gorge, is the impressive exit at the final portal. The main railroad then leaves the Conemaugh, and goes off southwestward along the slope of Chestnut Ridge towards Greensburg and Pittsburg. The river unites with the Loyalhanna Creek below, and then flows as the Kiskiminetas down to the Allegheny. The name of Loyalhanna means the "middle stream," while the tradition is that an impatient Indian warrior, anxious to move forward, shouted in the night to his comrades encamped on the other river—"Giesh-gumanito"—"let us make daylight"—and from this was derived its name of Kiskiminetas. A branch railroad from here goes to Blairsville, named in memory of the solitary pioneer of Blair's Gap, and another northward leads to the town of Indiana. The great Chestnut Ridge which the main railway runs along, gradually descending the slope, is the last mountain the westbound traveller sees until he reaches the Rockies. For seventy miles to the southwestward the Chestnut Ridge and Laurel Mountain extend in parallels, their crest lines being almost exactly ten miles apart, and enclosing the Ligonier Valley, out of which flows northward the Loyalhanna Creek, breaking through the Chestnut Ridge. Near this pass in 1757 was

built Fort Ligonier, another of the frontier outposts which resisted the incursions of the French and Indians, who then held all the country to the westward. In the Chestnut Ridge at Hillside is the "Great Bear Cave," an extensive labyrinth of passages and spacious chambers stretching more than a mile underground, which, like most such places, has its subterranean river and its tale of woe. A young girl, stolen by gypsies, to escape from them took refuge in this cave, and losing her way, perished, her bones being found years afterwards. Explorers since have always unwound balls of twine in this labyrinth, to be able to retrace their steps.

In a good farming district of the Westmoreland region is Greensburg, another railway junction where branches go southward to the Monongahela coalfields. Robert Hanna built a house near here in the eighteenth century, around which gathered some thirty log cabins, and the place in course of time became known as Hannastown, prominent in the early history of Western Pennsylvania. Here was held the first court convened west of the Alleghenies, and here were passed the patriotic resolutions of May 16, 1775, upon receipt of the news of the battle of Lexington at the opening of the Revolution, which sounded the keynote for the Declaration of Independence the following year. Here also first appeared during the Revolution General Arthur St. Clair, an immigrant from Scotland, the grandson of

the Earl of Roslyn, who lived in an humble house on Chestnut Ridge. He served in the French and Indian wars, and was the British commander at Fort Ligonier. Horrible Indian massacres and terrible retributions by the settlers were the chief features of the Revolutionary War in Westmoreland. At its close, the whites sent an expedition in 1782 against the Wyandottes, which was defeated. The savages soon wreaked fearful vengeance, raiding the region in July of that year and burning Hannastown, which was never rebuilt. Greensburg appeared soon afterwards, however, and in 1875 it celebrated the centenary of the Hannastown resolutions with patriotic spirit. In its Presbyterian churchyard lie the remains of General St. Clair, who, after founding and naming the city of Cincinnati, returned here, and died in 1818, at the age of eighty-four, in his lonely cabin on Chestnut Ridge, in unmerited poverty and obscurity. The stone over his grave has this significant inscription: "The earthly remains of General Arthur St. Clair are deposited beneath this humble monument, which is erected to supply the place of a nobler one due from his country." Being in a region of fine agriculture and prolific mines, Greensburg is a prosperous and wealthy town.

BRADDOCK'S DEFEAT.

Natural gas is added to coal and coke in the region beyond Greensburg, and the villages display

flaring gas torches at night for street lamps. The whole country, north, south and west, is a network of railways and a maze of mines, having long rows of burning coke ovens lighting the sky with their lurid glare. Here are mined the Westmoreland gas coals. The valley of the Monongahela River, coming up from West Virginia, approaches from the southward, a great highway for coal boats out to the Ohio and the West, also receiving a large coal tribute from its branch, the Youghiogheny, flowing by crooked course through Fayette County. Alongside the Monongahela is the great Edgar Thomson Steel Works, one of the chief establishments of the Carnegie Steel Company, making railway rails. Here is the famous Colonial battlefield of Western Pennsylvania, made immortal by General Braddock's defeat in July, 1755. This region was then a thick forest, through which an Indian trail coming over the Monongahela led to the junction of the two rivers forming the Ohio, where the French had established their stockade and trading post of Fort Duquesne. Braddock came into this region from beyond the mountains, his object being the capture of the fort. His defeat, a great event in our Colonial history, was due to his ignorance of the methods of Indian fighting and his refusal to listen to those who understood it; but he paid the penalty with his life, being shot, as was believed at the time, by one of his own men, after having had five horses shot under him. It was

in rallying the defeated remnant that Washington, the senior surviving officer, won his first military laurels. Braddock crossed the river and was caught in an ambuscade, eight hundred and fifty French and Indians surprising and defeating his force of about twenty-five hundred British regulars and Virginia Provincial troops, the loss being nearly eight hundred. Washington led the remnant back to Virginia, carrying Braddock about forty miles on the retreat, when he died. He was buried at night in the centre of the road, Washington reading the Episcopal burial service by torchlight, and the defeated army marched over the grave to conceal its location from the enemy. A handsome monument is erected on the battlefield at Braddock's. And thus, through iron mills and coal mines, amid smoke and busy industry, the Pennsylvania Railroad enters Pittsburg, the "Iron City."

THE GREAT IRON CITY.

The Monongahela River coming from the southward, and the Allegheny River flowing from the northward, drain the western defiles of the Alleghenies, and at Pittsburg unite to form the Ohio River. Each comes to the junction through a deeply-cut canyon, and at the confluence is a triangular flat upon which the original town was built. Like most American rivers, all these have names of Indian origin. Monongahela is the "river of high banks, breaking

off in places and falling down." Ohio is a Seneca word, originally pronounced "O-hee-o," and meaning the "beautiful river" or the "fair water," and Allegheny in the language of the Delawares has much the same signification, meaning "the fairest stream." All the Indians regarded the two as really the same river, of which the Monongahela was a tributary. The first white men exploring this region were the French, who came down from the lakes and Canada, when they spread through the entire Mississippi Valley. In 1753, however, Washington with a surveying party was sent out by Virginia and carefully examined the site of Pittsburg, advising, on his return, that a fort should be built there to check the advance of the French, and the next year this was done. Scarcely was it completed, however, when the French sent a summons to surrender, addressed "From the Commander-in-chief of His Most Christian Majesty's troops now on the Beautiful River to the Commander of those of Great Britain." A French force soon appeared, and the fort was abandoned. This began the French and Indian Colonial War that continued seven years, the French then erecting their famous fort and trading-post guarding the head of the Ohio, which they named after the great French naval commander of the seventeenth century, Marquis Abraham Duquesne. Then came Braddock's defeat in 1755, and for some time the region was quiet. Moravian missionary influence, how-

ever, had by 1758 detached many of the Indians from the French interest, and after another British attack and repulse, General Forbes came with a large force, and the French abandoned the fort and blew it up. Immediately rebuilt by the English, a Virginia garrison occupied the post, and it was named Fort Pitt. Then a larger fort was built at a cost of $300,000 and garrisoned by artillery, which the enemy vainly besieged in 1763. The next year a town site was laid out near the fort, and in 1770 it had twenty log houses. After the long succession of wars and massacres on that frontier had ceased, the village grew, and business began developing—at first, boat- and vessel-building, and then smelting and coal mining and the manufacture of glass. In 1812 the first rolling-mill started, and the war with England in that year caused the opening of a cannon foundry, which became the Fort Pitt Iron Works. The village of Fort Pitt had become Pittsburg, and expanded vastly with the introduction of steam, and it became an extensive steamboat builder for the Western waters. Railroad connections gave it renewed impetus; natural gas used as a manufacturing fuel was a wonderful stimulant; and it now conducts an enormous trade with all parts of the country, and is the seat of the greatest iron, steel and glass industries in America.

Few views are more striking than that given from the high hills overlooking Pittsburg. Rising steeply,

almost from the water's edge, on the southern bank of the Monongahela River, is Mount Washington, three hundred and fifty feet high. Inclined-plane railways are constructed up the face of this hill, and mounting to the top, there is a superb view over the town. The Allegheny River comes from the northeast and the Monongahela from the southeast, through deep and winding gorges cut into the rolling tableland, and uniting form the Ohio, flowing away to the northwest also through a deep gorge, although its bordering ridges of hills are more widely separated. Pittsburg stands upon the low flat surface of the peninsula, above the junction of the rivers, which has some elongated ridgy hills, stretching eastward through the centre. Its situation and appearance have thus not inaptly been compared to a flatiron, the point being at the head of the Ohio, and these ridgy hills making the handle. The city has overflowed into extensive suburbs across both rivers, the aggregate population being more than a half-million. Numerous bridges span the rivers, the narrow shores between the steep hills bearing a mixed maze of railways and factories. Countless chimney-smokes and steam-jets come up in all directions, overhanging the town like a pall; and so impressive is the obscuration, combined with the lurid glare of furnaces and the weird white gleam of electric lights, that the elevated view down into Pittsburg seems a veritable pandemonium. So startling is it on a lowering day that it

has been pointedly described by one who thus for the first time looked upon the "Smoky City," far down in its deep basin among the high hills, as appearing like "Hell with the lid off." There are plenty of railways in the scene, and scores of odd-looking, stumpy-prowed little steamboats built high above the water, having huge stern-wheels to drive them, with their noses thrust up on the sloping levee along the river bank, whereon is piled the cargoes, chiefly of iron products. The swift current turns all the sterns down stream, so that they lie diagonally towards the shore. Fleets of flat, shallow coal barges are moored along, waiting to be made up into tows for their journey down the Ohio, as Pittsburg has an extensive river trade, covering over twenty thousand miles of Western waters. Out of the weird and animated scene there come all sorts of busy noises, forges and trip-hammers pounding, steam hissing, railroad trains running, whistles screeching, locomotives puffing, bells ringing, so that with the flame jets rising, and the smokes of all colors blowing about, there is got a good idea of the active industries of this very busy place.

PITTSBURG DEVELOPMENT.

This wonderful industrial development all came within the nineteenth century. There is still preserved as a relic of its origin the little block-house citadel of the old Fort Pitt, down near the point of the peninsula where the rivers join. This

has recently been restored by the Daughters of the American Revolution—a small square building with a pyramidal roof. The surrounding stockade long ago disappeared. There is in the Pittsburg City Hall an inscribed tablet from Fort Pitt bearing the date 1764. The old building, which was the scene of Pittsburg's earliest history, for it stands almost on the spot occupied by Fort Duquesne, is among modern mills and storehouses, about three hundred feet from the head of the Ohio. Pittsburg, after an almost exclusive devotion to manufacturing and business, began some years ago to cultivate artistic tastes in architecture, and has some very fine buildings. There is an elaborate Post-office and an interesting City Hall on Smithfield Street; but the finest building of all, and one of the best in the country, is the magnificent Romanesque Court-house, built at a cost of $2,500,000, and occupying a prominent position on a hill adjoining Fifth Avenue. There is a massive jail of similar architecture, and a "Bridge of Sighs" connects them, a beautifully designed arched and stone-covered bridge, thrown for a passage-way across an intervening street. The main tower, giving a grand view, rises three hundred and twenty feet over the architectural pile, and, as in Venice, the convicted prisoner crosses the bridge from his trial to his doom. There are attractive churches, banks and business buildings, and eastward from the city, near Schenley Park, is the attractive Carnegie Li-

brary and Museum in Italian Renaissance, with a capacity for two hundred thousand volumes, a benefaction of Mr. Andrew Carnegie, originally costing $1,100,000, to which he has recently added $1,750-000 for its enlargement. The residential section is mainly on the hills east of Pittsburg and across the Allegheny River in Allegheny City, there being many attractive villas in beautiful situations on the surrounding highlands.

But the great Pittsburg attraction is the multitude of factories that are its pride and create its prosperity. Some of these are among the greatest in the world—the Edgar Thomson Works and Homestead Works of the Carnegie Steel Company, the Duquesne Steel Works, the Keystone Bridge Company, and others. The Edgar Thomas mills make over a million tons of rails a year, and at Homestead fifteen hundred thousand tons of steel will be annually produced, this being the place where nickel-steel armor-plates for the navy are manufactured. They largely use natural gas, and employ at times ten thousand men at the two great establishments. The Duquesne Works, just above Homestead on the Monongahela, have the four largest blast furnaces in the world, producing twenty-two hundred tons of pig-iron daily. The Keystone Bridge Works cover seven acres, and have made some of the greatest steel bridges in existence. The Westinghouse Electrical Works manufacture the greatest dynamos, including those of the

Niagara Power Company, and the Westinghouse Air-Brake Works is also another extensive establishment. In the Pittsburg district, covering about two hundred square miles, the daily product of mines and factories is estimated at $6,000,000.

The two men whose names are most closely connected with Pittsburg's vast industrial development are Andrew Carnegie and George Westinghouse. Carnegie was born at Dunfermline, Scotland, in 1837, and his father, a potter, brought him to Pittsburg when eleven years old. He began life as a telegraph messenger boy, attracted the attention of Colonel Thomas A. Scott, and was by him brought into the service of the Pennsylvania Railroad. Then he entered business, and became the greatest developer of the iron and steel industries of Pittsburg and its wealthiest resident. He some time ago sold out his interests to the Carnegie Steel Company, in which he is largely interested. Westinghouse, born in New York State in 1846, combined with business tact the genius of the inventor. He invented and developed the railway air-brake now in universal use, has established a complete electrical lighting and power system, and was the chief adapter of natural gas to manufacturing and domestic uses, being the inventor of many ingenious contrivances for its introduction and economical employment. He had a gas well almost at his door, for Pittsburg overlaid a great deposit. The enormous coal measures underlying and

surrounding the city have been its most stable basis for industry and profit, as the Pittsburg coal-field is one of enormous output. The deposits of Lake Superior furnish the ores for its furnaces, and the railroad development is such that each enormous establishment now has its special railroad to fetch in the ores from Lake Erie, where they are brought by vessels. Across in Allegheny City, where most of these ore-bringing roads go out, about one hundred acres in the centre of the city are reserved for the attractive Allegheny Park, one portion rising in a very steep hill, almost at the edge of the Allegheny River. Upon its top, seen from afar, stands a Soldiers' Monument, a graceful column, erected in memory of four thousand men of Allegheny County who fell in the Civil War. Soldier statues guard the base, and look out upon the smokes and steam jets of the busy city below, and thousands climb up there to enjoy the grand view.

COAL, COKE AND GAS.

The four counties adjoining Pittsburg turn out over thirty millions of tons of bituminous coal in a year. To carry this coal away, besides railways, the city has about a million and a half of tonnage of river craft of various kinds, a greater tonnage than all the Mississippi River ports put together. Its coal boats go everywhere throughout the Western water ways, and two thousand miles down the Ohio and Mississippi to New Orleans. Its stumpy but powerful little

tugs, with their stern-wheels, will safely convey fleets of shallow flatboats, sometimes over twenty thousand tons of coal being carried in a single tow. These flatboats are collected in the rivers about Pittsburg, waiting for the proper stage of water on the Ohio; and to regulate the depth at the city the curious movable dam was constructed at Davis's Island, four miles below Pittsburg, at a cost of $1,000,000, the dam opening when necessary to let freshets through, and having a lock five hundred feet long and one hundred and ten feet wide to pass the boats. The Monongahela River above Pittsburg has for miles a series of coal mines in the high bordering banks, the river being lined with coal "tipples," which load the flatboats; and it is also provided with a series of dams, which aid navigation and divide the channel into a succession of "pools." The very crooked Youghiogheny flows in at McKeesport, fifteen miles above Pittsburg, another river of coal mines, whose name was given as a signification of its crookedness by the matter-of-fact Indians, the word signifying "the stream flowing a contrary, roundabout course." This river comes northward out of the chief coke district of America, in the flanks of the long Chestnut Ridge, the Connellsville coke region sometimes turning out ten millions of tons annually from its ovens. Railways run in there on both river banks to Connellsville, a town of six thousand people, in the midst of the coke ovens, and about fifty-six miles south of Pittsburg.

Pittsburg is decreasing its use of natural gas for manufacturing, as the diminishing supply and greater distance it has to be brought are making it too costly for the iron and glass works, which are returning again to coal and coke, but the city is still said to use forty-five thousand millions of cubic feet in a year, mostly for domestic purposes. Pittsburg stands in a great but partly exhausted natural-gas district. The gas is stored under pressure beneath strata of rock, being set free when these are pierced. This is a gaseous member of the paraffin series, of which petroleum is a liquid member, and is mainly marsh-gas, the "fire-damp" of the miner. It originates in the decomposition of animal and vegetable life, and usually has but little odor, whilst its illuminating power is low, but in fuel value eight cubic feet equal one pound of coal. It was first used at Fredonia, New York, in 1821, for lighting purposes, being procured from a well. The natural-gas region is the part of Pennsylvania west of the Alleghenies, extending into New York, Ohio and West Virginia; and gas is also found in Indiana, Illinois, Kentucky and Kansas. It is held under enormous pressure within the pockets beneath the rocks, and when first reached in drilling, the tension has been known to equal a thousand pounds per square inch. It is not uncommon, when a well is drilled, to have all the tools and casing-pipe blown out, while an enormous thickness of masonry has to be constructed to hold down the cap

that covers the well. Its use began in Pittsburg in 1886, the chief field of supply then being Murrysville, about twenty miles east of the city, while there are also other fields southwest and east of Pittsburg. The pipes underlie all the streets, and a main route of supply is along the bed of the Allegheny River. There are said to be about sixteen hundred miles of pipes laid down to lead the gas to Pittsburg from the different fields.

PETROLEUM.

The great petroleum fields lie in and near the Pittsburg region, in the basin of the Allegheny and Ohio Rivers, and extend from New York southwest to West Virginia, and also into Ohio. This region has had enormous yields in different parts of the river basin, the wells, however, ultimately dwindling as their supplies are drawn out. The petroleum industry, which has been one of the greatest in Pennsylvania, has been gradually all absorbed by the Standard Oil Company, which is probably the most extensive industrial combination in America, and certainly the most powerful. Yet we are told that those financial magnates began their wonderful career with an aggregate capital of only $24,000, largely borrowed money. There have been forty millions of barrels of petroleum taken from this great basin in a single year. The oil wells are bored in many places, south, southwest, north and northeast of Pittsburg. The "Panhandle Railroad," which

PRAIRIE AVENUE, CHICAGO

crosses West Virginia to the Ohio, exhibits many of them. A branch of this railroad goes to Canonsburg, and thence to the town of Washington, on the old "National Road," thirty miles from Pittsburg. At Canonsburg was founded in 1773 Jefferson College, in a log cabin, which has now become the Jefferson Theological Seminary of the Presbyterian Church. Washington is a town of about four thousand people, rambling over a pleasant hilly region in Southwestern Pennsylvania, having as its chief institution Washington and Jefferson College, also a Presbyterian foundation, started in 1806 in what was then a remote Scotch-Irish colony beyond the mountains. Near this town in 1888 were struck the greatest petroleum wells the world ever knew. One of them, the Jumbo well, in sixty days after the first strike had poured out one hundred and forty thousand barrels of oil, flowing a steady circular stream of almost white oil, about five inches in diameter, at the rate of forty-two hundred gallons an hour. Another well, afterwards bored not far away, in its freshness of infancy poured out sixty-three hundred gallons an hour. Additional wells were bored with almost the same results; but they all afterwards dwindled, and finally ceasing a free flow, had to be pumped. This is the universal experience of all the oil regions, the "gushers," soon after the great strikes, giving out, as the store of petroleum in the reservoirs beneath becomes exhausted. But all this

shows how enormous is the natural wealth of the Pittsburg district—oil, coal, coke and gas, with iron, steel and glass, electricity and railways, contributing to the wonderful prosperity.

The greatest petroleum field, however, was up the Allegheny River, in Northwestern Pennsylvania, and the first wells bored to obtain it were sunk at Titusville, on Oil Creek, in 1859. The early settlers knew of the appearance of oil about the headwaters of the Allegheny in New York and Pennsylvania, and the name of Oil Creek was given a stream for this reason in Allegheny County, New York, and also to the one in Venango County, Pennsylvania. The Indians had long collected the oil on the shores of Seneca Lake in New York, a course that the white settlers followed, and it was for years sold as a medicine by the name of Seneca or Genesee oil. When its commercial value for illuminating purposes began to be recognized, Colonel E. L. Drake went to Titusville to see if it could be obtained in sufficient quantities. He bored the first well about a mile south of Titusville, and on August 26, 1859, the oil was struck at a depth of seventy-one feet. The drill suddenly sunk into the cavity of the rock beneath, and the oil rose within a few inches of the surface. A small pump was introduced which brought out four hundred gallons daily, and then a large pump, increasing the daily flow to a thousand gallons. Soon a steam-engine was applied, and the flow continued

uninterrupted for weeks. Titusville had at the time three hundred people. Many wells were sunk in the neighborhood with varying success, and the product of the Oil Creek district became so large that the market could not absorb it, and at the beginning of 1861, with two thousand wells in operation, the price declined to twenty-five cents per barrel. The two great wells were the Empire, originally yielding twenty-five hundred barrels daily, and the Phillips, nearly four thousand barrels. In 1863 the production had slackened, but the uses had expanded, and prices rose proportionately. Vast fortunes were then rapidly made, and as soon squandered. In the first twelve years of the development of this district, which extended over about four hundred square miles, there were taken from some four thousand wells forty-two millions of barrels of oil, which were marketed for $163,000,000. At first it was carried away by the railroads, of which several sent branches into the district, but there have since been laid extensive lines of pipes which convey it in various directions, and largely to New York and Philadelphia for foreign export. When this district was at the height of its yield it produced four hundred millions of gallons a year.

ASCENDING THE ALLEGHENY.

From Pittsburg, through bold and pleasing scenery, we ascend the Allegheny River, the broad channel

flowing grandly around stately bends enclosed between high hills. Thirty miles above Pittsburg the Kiskiminetas comes in, and in a region of coal mines and furnaces is found the town of Kittanning, which retains the name of the Indian village standing there in Colonial days. This original Indian village was attacked by Colonel Armstrong and three hundred troops at dawn on August 8, 1757, and the Indians, who sided with the French, refusing to surrender, they were pretty much all killed and their village burnt. Armstrong's name is preserved in the county. Beyond is Brady's Bend, a great curve of the river, and here are seen the derricks of many deserted oil wells, as the farther journey above for miles also discloses. This was the Modoc oil district. The Morrison well was struck in 1872, yielding five hundred barrels daily, and immediately a town was laid out, not inappropriately called Greece City, and it soon had a large population. This was a prolific oil region at one time, and back from the river were the well-known oleaginous towns of Modoc City, Karns City and Petrolia. The Allegheny River gradually leads us up to Venango County, which was the chief oil region. Franklin, the capital of the county, has about five thousand inhabitants, and is built at the mouth of French Creek, the site of the old French Fort Venango, which Indian word meant "a guiding mark on a tree." It stood on a commanding ridge, and was one of the chain of posts the

French built from the lakes across to the Ohio, to hold their possessions, dating from 1753. The French had a large garrison there, but after Canada was captured the English got possession, and in 1763 it was the scene of a terrible massacre, the Indians taking it, murdering the entire garrison, and slowly roasting the commandant to death.

Five miles above, Oil Creek flows into the Allegheny, and here is Oil City, the petroleum headquarters. It has had a varying history, being once almost destroyed by flood and twice by fire, but maintains its supremacy and is a complete oil town —the air filled with petroleum odors, and the lower streets saturated with the fluid. On the Allegheny, nine miles from Oil City, is Oleopolis, and a short distance inland is Pithole City, which was one of the famous oil towns whose rise and decline were so phenomenal. A few farmers here tried to get a scanty subsistence from the rocky and almost barren soil, where, on a hill, there was a fissure two to four feet wide, called the "pithole," from which came out at intervals hot air and bad smells. This was on the Holmden farm, which had been nominally valued at five dollars an acre. Somebody thought he detected the smell of oil among the odors coming up, and a well was bored. It struck oil in the winter of 1864–65, and was the greatest strike made down to that time—the United States Well yielding seven thousand barrels daily. Multitudes flocked thither, and

in six months Pithole City arose in the wilderness with fifteen thousand inhabitants, two theatres, an opera house, a daily newspaper, and seventy-two hotels of various degrees. Numerous wells were sunk, and the oil sold at $5 to $8 per barrel, being readily sent to the seaboard. The Holmden farm was soon sold for $4,000,000. There were some amazing speculative trades made. The story is told of a well striking oil and a speculative bystander at once buying a three-fourths interest in it for $18,000, agreeing to pay the money next day. Turning away from the seller, he met a man seeking such an investment, and promptly resold his interest for $75,000, receiving immediate payment. The yield of this region was so prolific that railroads and pipe lines were soon constructed to carry the oil away. Pithole had its great boom in the autumn of 1866, wells being bored in every direction, and real estate fetching enormous prices. One old fellow who had a few acres of arid land in the centre of the excitement sold his farm and hovel for $800,000, paid him on the spot in $1000 notes; and then he sorrowfully bemoaned, as he took a last look at the hovel he had occupied all his life, "Now I haint got any home." The rise of this wonderful town was rapid, and its downfall came all too soon. The oil supply became exhausted, the speculators left, the inhabitants dwindled in number, and by 1870 Pithole had reverted almost to its original condition. The chief hotel, which had cost

$31,000 to build, was afterwards sold for $100, and the population had declined in 1873 to nine families.

The valley of Oil Creek is filled with derricks and oil tanks, having a few pumping engines at work, but most of the derricks are over abandoned wells. Eighteen miles up Oil Creek is Titusville, and when the oil yield was at its height, about 1865, this valley had a population of seventy-five thousand people. Titusville is pleasantly built in the broadened intervale, surrounded by hills, the streets being wide and straight, and the residences comfortable, each in its garden enclosure. There are oil refineries, and iron works which make engines, tubing and other supplies; and the town, which has eight thousand people, is a headquarters for the Standard Oil Company. Twenty-seven miles farther northward is Corry, a prominent railroad centre, at the northern entrance to the Pennsylvania "Oil Dorado," as the region has been popularly called. Its name of Corry was that of the farmer who originally cultivated the soil when the place became a railway station in 1861, and the location of oil refineries then began its prosperity. There are now about six thousand inhabitants. It is within a short distance of the New York State boundary, and marks the northern limit of the Pennsylvania oil region. This whole district, once the prominent petroleum field of Pennsylvania, has been eclipsed, however, by other and more prolific oil basins. Fortunes were made here, but most of the

wealth passed away; and the history of the Pennsylvania petroleum trade and its vicissitudes, with the absorption of everything of value by the Standard Oil Company, has emphasized the truth so pointedly told by Robert Burns, that "The best laid schemes o' mice an' men gang aft a-gley." Its wonderful tide of prosperity and its subsequent ebb recall Shelley's lines "To Men of England":

"The seed ye sow another reaps;
The wealth ye find another keeps;
The robes ye weave another wears;
The arms ye forge another bears."

VISITING THE SUNNY SOUTH.

V.

VISITING THE SUNNY SOUTH.

Sir Walter Raleigh—Roanoke Island—Virginia Dare—Potatoes—Tobacco—Carolina—Cape Hatteras—Cyclones—Wilmington—Fort Fisher—Blockade Running—Charleston—Palmetto Trees—John C. Calhoun—Fort Moultrie—Osceola's Grave—Fort Sumter—Opening of the Civil War—The Swamp Angel—St. Michael's Church—Port Royal—Savannah—General Oglethorpe—Count Pulaski—Fort Pulaski—Bonaventure Cemetery—Okifenokee Swamp—Jacksonville—The Alligator—Oranges—Land of Flowers—Juan Ponce de Leon—Ferdinand de Soto—The Huguenots—Pedro Menendez—Dominique de Gourgues—Florida Peculiarities—Cumberland Sound—St. Mary's River—Cumberland Island—Jekyll Island—Amelia Island—Fernandina—Dungeness—General Greene—Light Horse Harry—St. Augustine—Matanzas River—Anastasia Island—Coquina—Fort San Marco—Fort Marion—Grand Hotels—Dade's Massacre—Coa-coo-chee, the Wildcat—Ormond—Daytona—New Smyrna—The Southern Cassadega—Indian River—Titusville—Rockledge—Fort Pierce—Jupiter Inlet—Palm Beach—Miami—Biscayne Bay—St. John's River—Mandarin—Palatka—Ocklawaha River—Lake Apopka—Lake Eustis Region—Ocala—The Silver Spring—Navigating the Ocklawaha—Lake George—Volusia—Lake Monroe—Enterprise—Sanford—Winter Park—Orlando—Lake Tohopekaliga—Kissimmee River—Lake Okeechobee—The Everglades—Lake Arpeika—The Seminoles—Suwanee River—Cedar Key—Tallahassee—Achille Murat—Wakulla Spring—Appalachicola—Pensacola—Homosassa—Tampa—Charlotte Harbor—Punta Gorda—Caloosahatchie River—Fort Myers—Cape Romano—Cape Sable—Florida Keys—Coral Building—The Gulf Stream—Key West—Fort Taylor—Sand Key—Dry Tortugas—Fort Jefferson—Florida Attractions.

CAROLINA.

Sir Walter Raleigh, of chivalrous memory, sent the first English colony to America in the sixteenth century. He was a half-brother of Sir Humphrey Gilbert, the English explorer, and had previously accompanied Gilbert to Newfoundland. He sent out an expedition in 1584, which selected Roanoke Island, south of the Chesapeake, for a settlement, and for this enterprise Queen Elizabeth knighted Raleigh, gave him a grant of the whole country, and directed that the new land be named in her honor, Virginia. In 1585–86 colonizing expeditions were sent to Roanoke, but they did not prosper. The colonists quarrelled with the Indians, and in the latter year the Governor returned to England for provisions and reinforcements, leaving behind with the colony his daughter, Mrs. Dare, and a granddaughter, nine days old, Virginia Dare, the first English child born in the new land. Then came the Spanish Armada to conquer England, and the long war with Spain. Nobody went to succor the little band of exiles on Roanoke Island for three years, and when they did, the settlement was obliterated, the hundred colonists and little Virginia Dare had disappeared, and no tidings of them were ever obtained. Thus perished Raleigh's colony; and, his means being exhausted, he was discouraged and sent no more expeditions out to America. His enterprise failed in making a perma-

nent settlement, but it gave two priceless gifts to Europe. The returning Governor took back to England the potato, which Raleigh planted on his Irish estate and which has proved the salvation of old Erin, and also the Virginia tobacco, which he taught the people to smoke, and the fragrant weed became the solace of the world.

No further attempts at colonization were made until the seventeenth century, when new grants were issued, and the country was named Carolina in honor of King Charles I. The Atlantic Coast south of the Chesapeake Bay entrance is low and bordered by sand beaches, which for most of the distance in front of North Carolina are far eastward of the mainland, with broad sounds and river estuaries between. These long and narrow beaches protrude in some cases a hundred miles into the ocean and form dangerous shoals, the extensive Albemarle and Pamlico Sounds being enclosed by them, the former stretching fifty miles and the latter seventy-five miles into the land. Out in front of Pamlico Sound projects the shoulder of Cape Hatteras into the Atlantic, the outer point of a low, sandy island, with shoals extending far beyond it, and marked by the great beacon of this dangerous coast, a flashing light one hundred and ninety feet high. Here is the principal storm factory of the southern coast, noted for cyclonic disturbances and dreaded by the mariner. Upon the outer Diamond Shoals the Government has long tried

in vain to erect a lighthouse. A lightship is kept there, but is frequently blown from her moorings and drifts ashore. The Gulf Stream, coming with warm and speedy current up from Florida, is here diverged out into the ocean by the shoulder of Hatteras; and, similarly, the whirling West India cyclones of enormous area come along with their resistless energy, destroying everything in their paths. In the terrific hurricane of the autumn of 1899 a wind velocity of one hundred and sixty miles an hour was reached momentarily, and the anemometer at Hatteras was blown down after having recorded a velocity of one hundred and twenty miles. The actual force exerted by one of these great cyclones in its work of devastation, which uproots trees, demolishes buildings and strews the coast with wrecks, has been calculated as equalling one thousand million horse-power.

WILMINGTON AND FORT FISHER.

The interior of North Carolina adjoining the Sounds is largely swamp land, and the broad belt of forest, chiefly pines, which parallels the coast all along the Atlantic seaboard. Through this region the railway extends southward from Virginia past Weldon to Wilmington, an uninteresting route among the swamps and pine lands, showing sparse settlement and poor agriculture, the wood paths exhibiting an occasional ox-team or a stray horseman going home with his supplies from the cross-roads store, a typical

representative of the "tar-heels of Carolina." The railway crosses the deep valley of Roanoke River, and then over the Tar and Neuse Rivers, traversing the extensive district that provides the world's greatest supply of naval stores—the tar, pitch, turpentine, rosin and timber that are so largely shipped out of the Cape Fear River from Wilmington. This is the chief city of North Carolina, having about twenty thousand people, and is located on the Cape Fear River twenty-six miles from its mouth. The city spreads along the eastern shore upon the peninsula between it and the ocean. The first settlement antedates the Revolution, when the inhabitants, who were sturdy patriots, drove out the royal Governor and made Fort Johnson, at the mouth of the river, an American stronghold. Upon the secession of the Carolinas in 1860–61 this fort was occupied by the Confederates and replaced by the larger work on Federal Point, between the river and the sea, known as Fort Fisher. Owing to the peculiar location and ease of entrance, the Cape Fear River became famous in the Civil War as a haven for blockade-runners, the effective defense made by Fort Fisher fully protecting this traffic. As the Union blockade of the Southern harbors became more completely effective with the progress of the war, this finally was about the only port that could be entered, and an enormous traffic was kept up between Wilmington and Nassau, on the British island of New Providence, in the Ba-

hamas, not far away, some three hundred fleet foreign steamships safely running the blockade into Cape Fear River during 1863 and 1864. The notoriety of this traffic, from which enormous profits were made, became world-wide, and it was decided late in 1864 that Fort Fisher had to be captured, in order to make the Southern blockade entirely effective. A joint land and naval attack was made by General Butler and Admiral Porter in December, 1864, but they were obliged to retire without seriously damaging the fort. Then General Butler ineffectively attempted to blow up the fort by exploding a powder-boat near it. Finally a new expedition was landed in January, 1865, under General Terry, and in coöperation with the navy, which made a fierce bombardment, they captured the fort on the 15th, after severe loss, the works being partially destroyed the following day by the accidental explosion of the powder magazine. This capture ended the blockade-running at Wilmington, and had much to do with precipitating the fall of Richmond in the following April.

CHARLESTON AND FORT SUMTER.

The railway from Wilmington to the South at first goes westward through a region largely composed of swamps, and then entering South Carolina turns southward past Florence to Charleston. The country is a variation of pine barrens and morass, sparsely inhabited, but raising much cotton, with many bales

brought to the stations for shipment. There is a much larger population of blacks than of whites. Charleston, the metropolis of South Carolina, is an active seaport with sixty-five thousand inhabitants, having a good export trade in cotton, timber, naval stores, rice, fruits and phosphate rock, of which there are extensive deposits on Ashley River nearby. It is a low-lying city, built upon a peninsula between the Ashley and Cooper Rivers, just inland from the ocean, and having a good harbor. Its many wooden houses are varied by more pretentious ones of brick and stone, but there is an air of decadence produced by the traces still remaining of the earthquake of 1886, which destroyed the greater part of the buildings and killed many people. The dwelling architecture of Charleston presents the tropical features of open verandas, spacious porticos and broad windows looking out upon gardens in which the palmetto tree grows, typical of South Carolina, the "Palmetto State." At the point of the peninsula between the rivers is the Battery, a park and popular promenade overlooking the harbor, with Fort Sumter down on its little shoal-like island, seen as a small dark streak upon the distant horizon. The first settlements in this part of South Carolina were made on the west bank of Ashley River, but the town, which had been named in honor of King Charles II., in 1680 was transferred to its present site. Charleston was prominent in the Revolution, its troops under Colonel

Moultrie repelling a British attack upon Sullivan's Island in 1776; but the city was captured by Sir Henry Clinton in 1780 after an obstinate defense. Before the Civil War it was the chief cotton-shipping port of America, though it is now surpassed by the Gulf ports and by Savannah. The great memory in the city of that time of its greatest prosperity is of the apostle of "State Rights," the South Carolina statesman, John C. Calhoun, who died in 1850. His statue stands in Citadel Square, and his grave is in St. Philip's churchyard.

The broad estuary of Charleston harbor is completely landlocked, and has an entrance from the sea about a mile wide. On the southern side is Fort Moultrie, which was enlarged from the battery that repulsed the British attack in 1776, on Sullivan's Island, this now being a favorite summer resort, and dotted with wooden cottages facing the sea. Just behind the fort is the grave of Osceola, the famous chief of the Seminoles, who long carried on war in the Florida everglades, but was captured and brought a prisoner to Fort Moultrie, dying in 1838. Fort Sumter, three miles below Charleston, stands upon a shoal of about three acres, out in mid-channel, which is protected from the water encroachment by stone rip-rapping. It was faced with brick during the Civil War, but the work has since been modernized. At the opening of the war, Major Anderson occupied this fort with the small force of seventy-five men,

which, after the secession of South Carolina from the Union, December 20, 1860, had been transferred thither from Fort Moultrie, the State troops immediately seizing Moultrie and all the other forts around the harbor, and the Federal public buildings in Charleston. They also constructed new batteries on Morris Island, the nearest land to Fort Sumter. On January 9, 1861, the Government at Washington sent the steamer "Star of the West" into the harbor with provisions and a reinforcement of two hundred and fifty troops. The first shot of the Civil War was on that day fired at her from Morris Island, and the ship being struck by this and subsequent shots, her commander abandoned the project and withdrew. There was a good deal of negotiation and delay afterwards, the Government, on April 8th, finally determining to provision Fort Sumter, as Anderson's supplies would be exhausted on the 15th, and so informing the Governor of South Carolina. On the 11th, General Beauregard, commanding the State forces, demanded the surrender of the fort, which was refused. Major Anderson was notified early next morning that the fort would be fired upon in one hour, and cannonading began at 4.20 A.M. on the 12th. A fleet of vessels appeared off the harbor at noon with provisions, exchanged signals with the fort, but made no attempt to land, and on the 13th terms of surrender were arranged by which Major Anderson and his little command marched out on the 14th with the

honors of war, saluting the American flag with fifty guns. This bombardment and evacuation set the North in a blaze of patriotic excitement and began the Civil War.

The naval forces of the United States attacked Fort Sumter in April, 1863, but were repulsed, the monitor "Keokuk" being so seriously injured that she afterwards sunk. Subsequently, the Union troops landed on Morris Island, erected batteries, and in August partly destroyed the works at Sumter; and its bombardment, and also that of Charleston, continued with but brief intermission till the war closed in 1865. On Morris Island was set up the original "long-range gun," General Gillmore's "Swamp Angel," now adorning a drinking-fountain at Trenton, New Jersey; and its ability, until it unfortunately burst, to shoot its bolts into Charleston, then regarded as an almost impossible distance to carry a projectile, attracted the attention of gunnery experts throughout the world. Its conspicuous mark was the white spire of St. Michael's Church up in the beleaguered city. This famous old church, dating from 1752, was struck six times during these attacks and seriously damaged. It was also partly demolished by a cyclone in 1885, and nearly destroyed by the earthquake of 1886; but it has been since restored, and its prominent steeple commands a good view. Charleston, however, seems to have always been used to this sort of thing. Its statue of William Pitt in

front of the City Hall had the right arm broken off by a British cannon-shot in 1780. But if the city is thus somewhat in dilapidation, its grand development of foliage and flowers gives a compensation. Everywhere in the suburbs and in the streets and gardens are seen magnificent azaleas, magnolias, camellias, and the famous live oak, which flourish in luxuriance and add to the charms of this restful South Carolina metropolis.

THE CITY OF SAVANNAH.

The seacoast of South Carolina and Georgia is composed largely of deeply indented bays, with many islands, tortuous bayous, and a labyrinth of water ways bordered by dense vegetation. Southward from Charleston harbor to the Savannah River many creeks provide a system of inland navigation and form fertile islands. There are two capacious Sounds, St. Helena and Port Royal, the latter being one of the finest harbors in the world, and the rendezvous of the American North Atlantic naval squadron when in these waters. This was the place of first landing of the original South Carolina colonists before they went to the Ashley River, and its chief town now is Beaufort, on St. Helena Island. These coast islands raise the famous "sea-island cotton," and the whole lowland region produces prolific crops of rice. The adjacent land is generally swampy, and its chief industry, outside of cultivating the fields, is the working of the extensive phos-

phate deposits, which are manufactured into fertilizers. The railway, largely constructed on piles, passes through much marsh and morass, crosses swift-running dirty streams, and over the swamps and among the pine timber, varied by the oak, bay tree and laurel, which the humid atmosphere has hung with garlands of sombre gray moss and clusters of ivy and other creeping plants. The festooned moss, overrunning and often destroying the foliage of the trees, gives the scene a weird and ghostly appearance. The railway route is bordered by an apparently almost impenetrable jungle, the few settlements are widely separated, and population is sparse, seeming to be chiefly negroes dressed in ancient-looking clothing ornamented with patches. The few whites who appear are bilious and yellowish, their complexions and garb being alike of the butternut hue, while both races seem to talk the same dialect. Thus moving farther southward, the Carolina "tar-heels" are replaced by the "crackers" and "butternuts," looking as if they had been rolled for a generation in the clayey soils drained by the Edisto, Coosawhatchie and Savannah Rivers and their neighboring streams, and who, farther inland, are the "clay-eaters" of Georgia. Then crossing the Savannah River, the route is upon the level lowlands down its Georgia bank, and into the city of Savannah, arriving amid a vast collection of rosin and pitch barrels, cotton bales and timber.

Savannah—derived from the Spanish word *sabana*, a "meadow or plain"—is known popularly as the "Forest City," and is built upon a bluff along the river shore, eighteen miles from the sea. It has fifty thousand people and a large export trade in naval stores, rice, timber and cotton, in the latter export being second only to New Orleans. It received great impetus after the Civil War, owing to its excellent railway connections with the interior, and is now the chief port of the Southern Atlantic coast. The city extends upon a level sandy plain, stretching back from the bluff shore along the river, has broad streets crossing at right angles, with small parks at the intersections, and many trees border the streets and fill the parks, so that it is fairly embowered in foliage, thus presenting an attractive and novel appearance. This adornment makes Savannah the most beautiful city of the coast—the oak, palmetto and magnolia, with the holly, orange, creeping ivy and clustering vines, setting the buildings in a framework of delicious green. The business quarter is along the bluff, where the ships moor alongside the storehouses, which have their upper stories on a level with the busy Bay Street at its top. Much of the present beauty of the city is due to the foresight of its founder who laid out the plan—General Oglethorpe, who selected this place in 1733 for the capital of his Province of Georgia, the youngest of the original thirteen colonies.

General James Edward Oglethorpe was a native of London and an officer in the British army, who, being of philanthropic tendencies, obtained a grant of the Province from King George for the purpose of providing an asylum for the poor debtors of England and a home for the Protestants of all nations. After founding the city and receiving a colony of Protestants from Salzburg, he visited England and brought out John and Charles Wesley in 1735, and got George Whitefield to come and preach to the colonists in 1737. War breaking out with Spain, he attacked Florida, carrying his invasion to the gates of St. Augustine, but was repulsed. He returned to England in 1743, but though he lived until 1785 as a retired general upon half-pay, he never revisited America. The British captured Savannah in the Revolution, and repulsed a combined French and American attempt to recapture it in 1779. In this attack Count Pulaski fell, and the spot, now Monterey Square, near the centre of the city, is marked by the Pulaski Monument, one of the noblest shafts in America. Count Pulaski is the patron saint of Savannah, and Fort Pulaski, named in his honor, guards the Savannah River entrance from the sea. During the Civil War, however, this fort was practically useless, as it was captured by the Unionists in 1862, and Tybee Roads, the harbor at the entrance, was hermetically sealed throughout the war by the blockading fleet. General Sherman's triumphant march

through Georgia ended in December, 1864, at Savannah, and his headquarters are still pointed out, opposite Madison Square. Savannah has a fine pleasure-ground in Forsyth Park, with its wealth of trees and ornamental shrubbery, and the adjoining Parade Ground containing the Confederate Soldiers' Monument. The favorite route to the southern suburbs is the famous Thunderbolt Shell Road leading to Thunderbolt River, and noted for its avenues of live oaks draped with Spanish moss. Here is also the favorite burial-place, the Bonaventure Cemetery, where the graves and tombstones are laid out alongside passages embowered by live oaks, their wide-stretching, gaunt and angular limbs being richly garlanded with the gray moss and encircled by creeping ivy. The long vista views under these sombre archways have an elfish look, peculiarly appropriate for a city of the dead, and it would take little imagination to conjure up the spirits of the departed and see them wandering beneath these canopies of shrouds.

THE CITY OF JACKSONVILLE.

Southward from Savannah, the railway route to Florida renews the monotonous landscape of woods and swamps. For ninety miles it goes in an almost straight line southwest through the pine belt of Southern Georgia, crossing the Ogeechee and Altamaha Rivers to Waycross, and then, turning to the southeast, proceeds in another almost straight line

for about an equal distance towards the coast, and crosses St. Mary's River into Florida. It traverses the edge of the noted Okifenokee Swamp of Georgia, the Indian "weaving, shaking, water," a moist and mushy region of mystery and legend, drained by the poetic Suwanee, the Indian "Echo river," which has been made the theme of a favorite melody. This stream flows through Florida into the Gulf of Mexico, while on the eastern side the extensive swamp overflows into the winding St. Mary's River leading to the Atlantic. To the southward, the pine woods of Florida grow out of a sandy soil nearly as level as a floor, in which almost every depression and fissure seems filled with water, and the balsamic odors of these pines, combined with the mildness of the winter climate, give an indication of the attractions which make Florida so popular as a resort for the Northern people. The route finally reaches the broad St. John's River at the Florida metropolis, Jacksonville, a Yankee city in the South, bearing the name of the famous President, General Andrew Jackson, and having thirty thousand population, largely of Northern birth. This is the centre of the railway system of Florida and of most of the business of the State, having a large export trade in timber, naval stores, phosphates, oranges and other Florida products. To the visitor, probably the first most forcible impression is made by the free growth of oranges along the streets and in the house gardens. The city

stands upon the northern and outer bank of a magnificent bend of St. John's River, this noble stream, which flows northward from Southern Florida, being a mile wide, and sweeping around to the eastward at Jacksonville to reach the sea about twenty-five miles beyond, its navigation having been improved by dredging and constructing jetties to maintain a channel through the bar at the mouth. The business section is near the shore, and the railways come down to the wharves; while, as the curving river stretches away to the southward, the bank is lined with rows of fine suburban villas, occupied by the business men who have built their comfortable homes amid the oranges, oleanders, magnolias and banana trees. The river has low tree-clad shores, and far over on the opposite bank are more villas and orange groves.

Jacksonville is well supplied with hotels and lodging-houses, which accommodate the crowds of winter visitors from the North, and it spreads into various suburban villages reached by steamboats and hard shell roads. It is the great *entrepôt* for Florida, standing at the northern verge, the salubrious and equable climate being the attraction, for frost is rare, and the winters are usually clear and dry and give a most magnificent atmosphere. Rows of splendid oaks line the streets, and form fine archways of green, giving a delicious shade. Besides the orange, the alligator is also a Jacksonville attraction, live ones being kept as pets, little ones sent northward in

boxes for gifts, and dead ones of all sizes prepared for ornaments. This reptile is the type and emblem of Florida; his skin and teeth are worked into fantastic shapes, and his curious bones and formation do duty in the make-up of many "Florida curiosities." In fact, outside of the timber, which is most prolific, the best known Florida crops are the alligator and the orange. Although frosts have killed many in late years, yet the product of the orange trees is still large, Southern Florida containing the most famous orange groves, especially along the Indian River and on the lakes of the upper St. John's River, where they are usually planted on the southern borders of the lakes, so that the frost is killed by the winds carrying it over the water, and thus the orange trees are protected.

THE LAND OF FLOWERS.

In the early sixteenth century there flourished a valiant Spaniard of noble birth, a grandee of Aragon, who had taken part in the conquest of Grenada, Don Juan Ponce de Leon. He had accompanied Columbus on one of his American voyages, and in 1510 was appointed Governor of Puerto Rico. The bold Don Juan had become somewhat worn by a life of dangerous buccaneering and romantic adventure, and being rather advanced in years he was losing the attractiveness which had long added charms to his gallantries. From the Indians of Puerto Rico he

heard of an island off to the northwestward, which they called Bimini, and he listened with wonder and constantly increasing interest to the tales they told of an extraordinary and miraculous spring which it contained that would restore youth to the aged and health to the decrepit—the "Fountain of Perpetual Youth." They described it as being in a region of surpassing beauty, and said there were found abundant gold and many slaves in this land of promise. The rugged old warrior was fired with the prospect of restored youth, and soon secured from the king a grant of Bimini. In March, 1513, he sailed with a large expedition from Puerto Rico, discovered some of the Bahama Islands, coasted along the mainland to latitude 30° 8′ north, and on Easter Sunday, April 8th, landed a short distance south of St. John's River and took possession, calling the country Florida, from "Pasqua Florida," the Spanish name for the day. He did not find the magic spring, however, but he did discover a fairy scene, a land filled with a profusion of fruits and flowers. Though he subsequently diligently searched for it, he unfortunately never found the miraculous fountain. He explored the Gulf Coast, and returned to the quest again in 1521, when he got into quarrels with the Indians, was mortally wounded in a combat, and went back to Cuba to die.

Another Spanish grandee, fired with zeal for gold and conquest, appeared upon the scene somewhat

later in the sixteenth century. Ferdinand de Soto, a native of Jerez, whose only heritage was his sword and shield, had accompanied various expeditions to Darien and Nicaragua, and in 1532 joined Pizarro in the conquest of Peru, where he acquired great wealth, with which he returned to Spain. Soon after, being anxious for more adventure, he was appointed Governor of Cuba and Florida, and given a commission to explore and settle the Spanish possessions in the latter country, then including the whole northern coast of the Gulf of Mexico. In May, 1539, he sailed from Havana with a large fleet and six hundred men, coasted around Florida and landed at Tampa Bay on the Gulf side, where his explorations ashore began in July. Fabulous stories had been told him of the wealth of the country by those who had been there, and De Soto's plan was to go everywhere in search of gold. He captured Indians for guides, and found a Spaniard, Juan Ortiz, whom they had taken captive several years before, but who was now living with them as a friend, knew their language and became interpreter. Then De Soto, by his aid, began a most difficult exploration, advancing through thick woods, north and east, amid tangled undergrowth, over bogs and marshes, crossing rivers and lakes, fighting the Indians who resented his cruelties, for he made them his slaves and bearers of burdens, tortured and killed them if they resisted. But he found no gold, though he pushed steadily onward, and turn-

ing westward in the quest, his numbers growing smaller and the survivors weaker under the weight of their privations. He travelled a long distance, crossing Northern Florida and Georgia into the Carolinas, and probably to Tennessee, descending the Alabama River, and having a battle with the Indians near Mobile Bay in October, 1540; then turning again northward, crossing the Mississippi River, which he discovered in May, 1541, near the Chickasaw Bluffs, exploring it nearly to the mouth of the Missouri, and then turning southward he sailed down the river, and finally died of fever near the mouth of Red River in May, 1542. During the three years' wanderings nearly half his force had perished in battle, or of privation and disease. The Indians were in awe of him and believed him immortal, and a panic therefore seized his surviving followers, who feared annihilation if the savages discovered that De Soto was dead. So they quietly buried him at night, from a boat in midstream, sinking the corpse in the great Father of Waters. Discouraged and almost hopeless, his followers managed to build some small vessels, and the next year arrived safely in Mexico.

Neither of these expeditions succeeded in colonizing Florida, but they left a feeling of hatred among the Indians, caused by the Spanish cruelties, which always afterwards existed. In 1564 some French Huguenots, led by René de Loudonnière, attempted making a settlement at the mouth of St. John's River,

and built Fort Caroline there. News of this reached Spain, and in 1565 another colonization expedition was sent out under Don Pedro Menendez d'Aviles, which set sail from Cadiz, and on St. Augustine's Day, August 28th, landed not far from where Ponce de Leon had made his first invasion, and founded a colony which he named St. Augustine, in honor of his day of arrival. As soon as Menendez was established on shore he attacked the Huguenots at St. John's River, and hanged such of them as had escaped being killed in the battle, declaring that he did this because they were Protestants. Some of them who had been away from the fort at the time were afterwards shipwrecked near St. Augustine, and these he also captured and put to death. The French Fort Caroline was then garrisoned by the Spaniards, its name changed to Fort San Mateo, and they also fortified with redoubts both sides of the river entrance. The story of the atrocities of Menendez was received with indignation in France, but the King, controlled by intrigue, dared do nothing, such was his fear of the power of Spain.

Full vengeance was afterwards taken, however. Dominique de Gourgues, a French gentleman of Mont-de-Marsan, who hated the Spaniards with a mortal hatred, took up the quarrel, sold his inheritance, borrowed money, and equipped a small expedition of three vessels and one hundred and eighty men. He concealed his real object, and sailing for

some time through the tropical seas, finally came to Cuba, when he first made known his purpose to his followers. He landed at St. Mary's River, opening communication with the Indians, and a joint attack upon the Spaniards to the southward was arranged. In May, 1568, the fort and redoubts at St. John's River were stormed and taken, a few Spaniards being captured alive, all the rest having been slain in the combat. Gourgues was shown nearby the trees whereon Menendez had hanged the French prisoners when he first took the fort, having placed over them the inscription "Not as Frenchmen, but as Lutherans." He hanged his Spanish prisoners on the same trees, and over them was also nailed an inscription, burned with a hot iron on a tablet of pine, "Not as Spaniards, but as Traitors, Robbers and Murderers." Gourgues' mission of vengeance was fulfilled. His Indian allies demolished the fort and the redoubts at the mouth of the river. He then sailed home with his expedition, landing at Rochelle on the day of Pentecost, where the Huguenots greeted him with all honor, and whilst he was scorned at court and lived for some years in obscurity, Queen Elizabeth showed him great favor; and as he was going overland to join the army of Portugal to once more fight his enemies, the Spaniards, he fell ill at Tours and died. The French made no more attempts at settlement in Florida, and the Spaniards afterwards possessed it, though frequently being at war with the

English. Spain finally ceded the "Land of Flowers" to the United States, which took final possession in 1821.

SOME FLORIDA PECULIARITIES.

Florida is a strange region, yet most attractive. The traveller regards its surface as mainly a monotonous level of forest and swamp, with fruit and floral embellishments, but it in fact rises by an almost insensible ascent from the coast towards the interior, where there is a central summit ridge all along the peninsula of about three hundred feet elevation, covered with pine woods. Most of the surface, however, is but a few feet above the sea-level, these "flatlands," as they are called, being grass-grown savannahs, pine woods, swamps and cabbage-palm thickets. The southern part of the peninsula is the region of the everglades, which have been formed by successive dykes of coral, built by the industrious little insect long ago. The upper part of this region is occupied by the extensive but shallow waters of Lake Okeechobee, which merges insensibly into the everglades south and east, the Seminoles calling this grass-grown and spongy region, which is still the abode of some remnants of the tribe, Pa-ha-yo-kee, meaning "much grass in water." These everglades are penetrated in all directions by tortuous water channels of slight depth; and at frequent intervals in the whole district there are wooded islands possessing fertile soils and covered with dense tropical veg-

etation. These islands are said to have been surrounded by the sea in bygone ages, and they then stood in the same relation to the mainland as do the present Southern Florida reefs and keys. Wide tracts of cypress swamp separate the everglades from the Gulf of Mexico, while in Southern Florida they approach within a few miles of the Atlantic Coast, being separated by an intervening dyke of coral, crossed by frequent streams of rapid current, for the everglades are far from being stagnant swamps. There are also many other extensive swamps in the State.

The Florida seacoast is usually protected by sand beaches which are quite hard, and are separated from the mainland by interior lagoons. The mangrove and the coral, constantly growing, are ever encroaching, however, on the sea-waters, and thus Florida seems to have been constructed. The country is full of water courses, lakes and springs, some of the latter being regarded as among the most remarkable in the world, the famous Silver Spring near Ocala being estimated as discharging three hundred millions of gallons daily. There are countless springs along the coasts, and one of these bursts up in the sea near St. Augustine, two miles off shore, with a torrent so vigorous that the ocean waves break over the column of fresh water as if it were a sunken reef. Scientific investigators are amazed at the vast amounts of water everywhere visible and discharged

from these springs, and with only the narrow and low peninsula for a watershed, the problem as to where the vast water supply comes from baffles solution. Some of the Florida lakes are subject to remarkable fluctuations of level, and one of them, Lake Jackson, ran suddenly dry at the time of the Charleston earthquake in 1886, but after a few weeks the water began returning, and it soon resumed its natural proportions.

CUMBERLAND SOUND.

The memory of the Duke of Cumberland, son of King George II., the victor of the battle of Culloden, in Scotland, where he defeated the Pretender in 1746, is preserved in America in the name of Cumberland Sound, the finest harbor on the Southern Atlantic Coast. St. Mary's River, coming out of Okifenokee swamp to make the northern boundary of Florida, flows an erratic course, boxing the compass in every direction until it finally heads eastward and debouches in Cumberland Sound, among a group of islands forming a large landlocked harbor. This river and sound, the boundary between Georgia and Florida, were, prior to the Revolution, a disputed frontier between the English and the Spaniards. To the northward of the entrance from the sea is Cumberland Island in Georgia, then comes Jekyll Island, with its magnificent club-house and elaborate cottages, and then St. Simon's Bay, having as its chief port the busy lumber-shipping town of Brunswick.

To the southward of the Cumberland entrance is Amelia Island in Florida. The sound behind Amelia and Cumberland Islands is a magnificent roadstead, capable of floating at safe anchorage an enormous fleet. Amelia Island is a long, narrow sand bank with much foliage upon it, stretching about fourteen miles down the Florida coast to Nassau Sound. On the sea front of this island is one of the finest sand beaches on the Atlantic. Behind it is the arm of the sea known as Amelia River, and the port of Fernandina, thirty-six miles northeast of Jacksonville, having at the point of the island, guarding the entrance to its harbor, old Fort Clinch, a superannuated brick-work battery, formerly of great importance, but now of little use, though it was somewhat strengthened to meet the exigencies of the recent Spanish War.

The French Huguenots first came along here and settled, as they did at the St. John's River entrance, and they called the island Garde. They found here a powerful Indian tribe, whose chief, the "Cacique of Garde," their historian described as "handsome and noble," and his queen as "beautiful and modest," and the same authority says they had "five handsome daughters." The French were engaged in desultory quarrels with the Spaniards south of them at St. Augustine, and the young gallants of the colony, in the intervals of the warfare, alternately courted and jilted the Indian maidens, the result being a

savage attack and massacre; and finally, between Indian and Spanish enmity, the settlement disappeared. But the English, made of sterner stuff, ultimately came along, settling Georgia, and giving British names to the islands, the rivers and the Sound, which they still retain. For a long time this was disputed territory between the English and the Spaniards, the latter claiming everything northward to Carolina. General Oglethorpe marched through here to attack St. Augustine, and in 1763 the British held Amelia Island, extending the little fort to almost its present proportions, and laying out a town behind it, while to the southward the Countess of Egmont established an indigo plantation, which flourished for a brief period. Spain ultimately got the island, and it came into American possession with Florida in 1821. A little town with sandy streets, a pretty park, much foliage, delicious air bringing the balsam of the pines and the tonic of the sea, and hotels accommodating the influx of winter visitors, make up the Fernandina of to-day. Its beach on the ocean front, more than a mile away, is one of the finest in existence, hard as a floor, level and broad, stretching as far as eye can see, and having a grand surf booming upon it.

On Cumberland Island is the estate of Dungeness. General Nathaniel Greene of Rhode Island, one of Washington's most trusted officers, was the commander of the Revolutionary armies in the South in

1780–81 which drove the British out of that section, gained the victory of Cowpens in South Carolina, and compelled the withdrawal of Cornwallis to Yorktown, which ended in his surrender. After the close of the war, in gratitude for his great services, the people of Georgia presented him with this estate of about ten thousand acres. He made it his home for a time, but it afterwards passed away from his family, and being neglected, the old coquina stone mansion was burnt. The house has since been reconstructed, and a picturesque avenue of moss-hung live oaks a mile long stretches over the island near it to the sea. In a little cemetery on the estate are the graves of General Greene's widow and daughter. Here is also the grave of "Light Horse Harry" of the Revolution (the father of General Robert E. Lee), who died abroad in 1818. He had visited and loved Dungeness, and requested to be buried there. Oaks and palmettos embower these modest graves, which are carefully preserved.

ANCIENT ST. AUGUSTINE.

St. Augustine, thirty-six miles southeast of Jacksonville, on the seacoast, is the oldest city in the United States, founded by Menendez in 1565, and existing to this day with the characteristics of a Spanish town of the sixteenth century, which have been also reproduced in the architecture of most of the newer buildings. A small inlet from the ocean, about

fifteen miles south of the mouth of St. John's River, stretches its arms north and south, the latter arm, called Matanzas River, seeking the sea again about eighteen miles below. It thus forms Anastasia Island, sheltering the harbor like a breakwater, and behind it the city is built, being protected by a sea-wall nearly a mile long, built of coquina or shell-stone. Another arm of the sea, called San Sebastian River, is a short distance inland, so that the town site is really upon a peninsula. About five thousand people reside permanently in St. Augustine, a few of Spanish descent, and more of them the offspring of a colony of Minorcans who came in 1769, but in winter the Northern visitors to the palatial hotels swell the population to over ten thousand. The town is built on a level sandy plain, and the older streets are narrow, being only a few feet wide and without sidewalks. The projecting balconies of some of the ancient houses almost touch those opposite. The old streets are paved with coquina and the old houses are built of it, this curious shell-limestone, quarried on Anastasia Island, hardening upon exposure to the air. A few streets running north and south, crossed by others at right angles, and a broader front street bordered by the sea-wall which makes a fine promenade, compose the town. This sea-wall of coquina is capped with granite, and was built after the American occupation of the city. At its northern end is Fort Marion and at the southern end St. Francis

Barracks, the United States military post, so named because it occupies the site of the old Convent of St. Francis, having some of its coquina walls incorporated in the present structure. The harbor in front, which in past centuries sheltered so many Spanish fleets and those of Spanish enemies as well, is now chiefly devoted to yachting.

When Menendez and his Spaniards first landed they built a wooden fort commanding the harbor entrance, surrounded by pine trees, which they named San Juan de Pinos. This was afterwards replaced by Fort San Marco, constructed of coquina, which was nearly a hundred years building, and was finished in 1756. Upon the transfer of Florida to the United States this became Fort Marion. It is a well-preserved specimen of the military architecture of the eighteenth century, built on Vauban's system, covering about four acres, with bastions at the corners, each protected by a watch-tower, and is surrounded by a moat, the walls being twenty-one feet high. The fort is in reasonably good preservation, and is said to have been constructed mainly by the labor of Indians. It took so long to build and cost so much under the wasteful Spanish system that one sovereign wrote that it had almost cost its weight in gold; yet it was regarded then as supremely important to be finished, being the key to the Spanish possession of Florida. Over the sally-port at the drawbridge are carved the Spanish arms and an inscription recording

the completion of the fort in 1756, when Ferdinand VI. was King of Spain and Don Hereda Governor of Florida. It mounted one hundred of the small guns of those days, and the interior is a square parade ground, surrounded by large casemates. Upon each side of the casemate opposite the sally-port is a niche for holy water, and at the farther end the Chapel. Dungeons and subterranean passages abound, of which ghostly tales are told. This fort is the most interesting relic of the ancient city, a picturesque place, with charms even in its dilapidation.

There are other quaint structures in this curious old town. A gray gateway about ten feet wide, flanked by tall square towers, marks the northern entrance to the city, the ditch from the fort passing in front of it. In one of the streets is the palace of the Spanish Governors, since changed into a post-office. The official centre of the city is a public square, the Plaza de la Constitucion, having a monument commemorating the Spanish Liberal Constitution of 1812, and also a Confederate Soldiers' Monument. This square fronts on the sea-wall, and alongside it and stretching westward is the Alameda, known as King Street, leading to the group of grand hotels recently constructed in Spanish and Moorish style, which have made modern St. Augustine so famous. These are the Ponce de Leon, the Alcazar and the Cordova, with the Casino, adjoined by spa-

cious and beautiful gardens. These buildings reproduce all types of the Hispano-Moorish architecture, with many suggestions from the Alhambra. The Ponce de Leon, the largest, is three hundred and eighty by five hundred and twenty feet, enclosing an open court, and its towers rise above the red-tiled roofs to a height of one hundred and sixty-five feet, the adornments in colors being very effective. To the southward of the town, adjoining the barracks, is the military cemetery, where a monument and three white pyramids tell the horrid story of the Dade massacre during the Seminole War. Major Dade, a gallant officer, and one hundred and seven men, were ambushed and massacred by eight hundred Indians in December, 1835, and their remains afterwards brought here and interred under the pyramids. Opposite the barracks is what is claimed to be the oldest house in the United States, occupied by Franciscan monks from 1565 to 1580, and afterwards a dwelling. It has been restored, and contains a collection of historical relics.

St. Augustine has had a chequered history. In 1586, Queen Elizabeth's naval hero, Sir Francis Drake, sailing all over the world to fight Spaniards, attacked and plundered the town and burnt the greater part of it. Then for nearly a century the Indians, pirates, French, English and neighboring Georgians and Carolinians made matters lively for the harried inhabitants. In 1763 the British came

into possession, but they ceded it back to Spain twenty years later, the town then containing about three hundred householders and nine hundred negroes. It became American in 1821, and was an important military post during the subsequent Seminole War, which continued several years. It was early captured by the Union forces during the Civil War, and was a valuable stronghold for them. This curious old town has many traditions that tell of war and massacre and the horrible cruelties of the Spanish Inquisition, the remains of cages in which prisoners were starved to death being shown in the fort. Its best modern story, however, is told of the escape of Coa-coo-chee, the Seminole chief, whose adventurous spirit and savage nature gained him the name of the "Wild Cat." The ending of the Seminole War was the signing of a treaty by the older chiefs agreeing to remove west of the Mississippi. Coa-coo-chee, with other younger chiefs, opposed this and renewed the conflict. He was ultimately captured and taken to Fort Marion. Feigning sickness, he was removed into a casemate giving him air, there being an aperture two feet high by nine inches wide in the wall about thirteen feet above the floor, and under it a platform five feet high. Here, while still feigning illness, he became attenuated by voluntary abstinence from food, and finally one night squeezed himself through the aperture and dropped to the bottom of the moat, which was dry. Eluding all the guards, he

escaped and rejoined his people. The flight caused a great sensation, and there was hot pursuit. After some time he was recaptured, and being taken before General Worth, was used to compel the remnant of the tribe to remove to the West. Worth told him if his people were not at Tampa in twenty days he would be killed, and he was ordered to notify them by Indian runners. He hesitated, but afterwards yielded, and the runners were given twenty twigs, one to be broken each day, so they might know when the last one was broken his life would pay the penalty. In seventeen days the task was accomplished. The tribe came to Tampa, and the captive was released, accompanying his warriors to the far West. This ended most of the Indian troubles in Florida, but some descendants of the Seminoles still exist in the remote fastnesses of the everglades.

THE FLORIDA EAST COAST.

All along the Atlantic shore of Florida south of St. Augustine are popular winter resorts, their broad and attractive beaches, fine climate and prolific tropical vegetation being among the charms that bring visitors. Ormond is between the ocean front and the pleasant Halifax River, its picturesque tributary, the Tomoka, being a favorite resort for picnic parties. A few miles south on the Halifax River is Daytona, known as the "Fountain City," and having its suburb, "the City Beautiful," on the opposite

bank. New Smyrna, settled by Minorcan indigo planters in the eighteenth century, is on the northern arm of Indian River. Here are found some of the ancient Indian shell mounds that are frequent in Florida, and also the orange groves that make this region famous. Inland about thirty miles are a group of pretty lakes, and in the pines at Lake Helen is located the "Southern Cassadaga," or Spiritualists' Assembly. For more than a hundred and fifty miles the noted Indian River stretches down the coast of Florida. It is a long and narrow lagoon, parallel with the ocean, and is part of the series of lagoons found on the eastern coast almost continuously for more than three hundred miles from St. Augustine south to Biscayne Bay, and varying in width from about fifty yards to six or more miles. They are shallow waters, rarely over twelve feet deep, and are entered by very shallow inlets from the sea. The Indian River shores, stretching down to Jupiter Inlet, are lined with luxuriant vegetation, and the water is at times highly phosphorescent. Upon the western shore are most of the celebrated Indian River orange groves whose product is so highly prized. At Titusville, the head of navigation, where there are about a thousand people, the river is about, at its widest part, six miles. Twenty miles below, at Rockledge, it narrows to about a mile in width, washing against the perpendicular sides of a continuous enclosing ledge of coquina rock, with pleasant

overhanging trees. Here comes in, around an island, its eastern arm, the Banana River, and to the many orange groves are added plantations of the luscious pineapple. Various limpid streams flow out from the everglade region at the westward, and Fort Pierce is the trading station for that district, to which the remnant of the Seminoles come to exchange alligator hides, bird plumage and snake skins for various supplies, not forgetting "fire-water." Below this is the wide estuary of St. Lucie River and the Jupiter River, with the lighthouse on the ocean's edge at Jupiter Inlet, the mouth of Indian River.

Seventeen miles below this Inlet is Palm Beach, a noted resort, situated upon the narrow strip of land between the long and narrow lagoon of Lake Worth and the Atlantic Ocean. Here are the vast Hotel Royal Poinciana and the Palm Beach Inn, with their cocoanut groves, which also fringe for miles the pleasant shores of Lake Worth. Prolific vegetation and every charm that can add to this American Riviera bring a crowded winter population. The Poinciana is a tree bearing gorgeous flowers, and the two magnificent hotels, surrounded by an extensive tropical paradise, are connected by a wide avenue of palms a half-mile long, one house facing the lake and the other the ocean. There is not a horse in the settlement, and only one mule, whose duty is to haul a light summer car between the houses. The vehicles of Palm Beach are said to be confined to

"bicycles, wheel-chairs and jinrickshas." Off to the westward the distant horizon is bounded by the mysterious region of the everglades. Far down the coast the railway terminates at Miami, the southernmost railway station in the United States, a little town on Miami River, where it enters the broad expanse of Biscayne Bay, which is separated from the Atlantic by the first of the long chain of Florida keys. Here are many fruit and vegetable plantations, and the town, which is a railway terminal and steamship port for lines to Nassau, Key West and Havana, is growing. Nassau is but one hundred and seventy-five miles distant in the Bahamas, off the Southern Florida coast, and has become a favorite American winter tourist resort.

ASCENDING ST. JOHN'S RIVER.

The St. John's is the great river of Florida, rising in the region of lakes, swamps and savannahs in the lower peninsula, and flowing northward four hundred miles to Jacksonville, then turning eastward to the ocean. It comes through a low and level region, with mostly a sluggish current; is bordered by dense foliage, and in its northern portion is a series of lagoons varying in width from one to six miles. The river is navigable fully two hundred miles above Jacksonville. The earlier portion of the journey is monotonous, the shores being distant and the landings made at long piers jutting out over the shallows

HERCULES' PILLARS, COLORADO RIVER

from the villages and plantations. At Mandarin is the orange grove which was formerly the winter home of Harriet Beecher Stowe; Magnolia amid the pines is a resort for consumptives; and nearby is Green Cove Springs, having a large sulphur spring of medicinal virtue. In all directions stretch the pine forests; and the river water, while clear and sparkling in the sunlight, is colored a dark amber from the swamps whence it comes. The original Indian name of this river was We-la-ka, or a "chain of lakes," the literal meaning, in the figurative idea of the savage, being "the water has its own way." It broadens into various bays, and at one of these, about seventy-five miles south of Jacksonville, is the chief town of the upper river, Palatka, having about thirty-five hundred inhabitants and a much greater winter population. It is largely a Yankee town, shipping oranges and early vegetables to the North; and across the river, just above, is one of the leading orange plantations of Florida—Colonel Hart's, a Vermonter who came here dying of consumption, but lived to become, in his time, the leading fruit-grower of the State. Above Palatka the river is narrower, excepting where it may broaden into a lake; the foliage is greener, the shores more swampy, the wild-fowl more frequent, and the cypress tree more general. The young "cypress knees" can be seen starting up along the swampy edge of the shore, looking like so many champagne bottles set to cool

in the water. The river also becomes quite crooked, and here is an ancient Spanish and Indian settlement, well named Welaka, opposite which flows in the weird Ocklawaha River, the haunt of the alligator and renowned as the crookedest stream on the continent.

GOING DOWN THE OCKLAWAHA.

The Ocklawaha, the "dark, crooked water," comes from the south, by tortuous windings, through various lakes and swamps, and then turns east and southeast to flow into St. John's River, after a course of over three hundred miles. It rises in Lake Apopka, down the Peninsula, elevated about a hundred feet above the sea, the second largest of the Florida Lakes, and covering one hundred and fifty square miles. This lake has wooded highlands to the westward, dignified by the title of Apopka Mountains, which rise probably one hundred and twenty feet above its surface. To the northward is a group of lakes—Griffin, Yale, Eustis, Dora, Harris and others—having clear amber waters and low shores, which are all united by the Ocklawaha, the stream finally flowing northward out of Lake Griffin. This is a region of extensive settlement, mainly by Northern people. The mouth of the Ocklawaha is sixty-five miles from Lake Eustis in a straight line, but the river goes two hundred and thirty miles to get there. To the northward of this lake district is the thriving town of Ocala, with five thousand people, in a region of good

agriculture and having large phosphate beds, the settlement having been originally started as a military post during the Seminole War. About five miles east of Ocala is the famous Silver Spring, which is believed to have been the "fountain of perpetual youth," for which Juan Ponce de Leon vainly searched. It is the largest and most beautiful of the many Florida springs, having wonderfully clear waters, and covers about three acres. The waters can be plainly seen pouring upwards through fissures in the rocky bottom, like an inverted Niagara, eighty feet beneath the surface. It has an enormous outflow, and a swift brook runs from it, a hundred feet wide, for some eight miles to the Ocklawaha.

This strange stream is hardly a river in the ordinary sense, having fixed banks and a well-defined channel, but is rather a tortuous but navigable passage through a succession of lagoons and cypress swamps. Above the Silver Spring outlet, only the smallest boats of light draft can get through the crooked channel. This outlet is thirty miles in a direct line from the mouth of the river at the St. John's, but the Ocklawaha goes one hundred and nine miles thither. The swampy border of the stream is rarely more than a mile broad, and beyond it are the higher pine lands. Through this curious channel, amid the thick cypress forests and dense jungle of undergrowth, the wayward and crooked river meanders. The swampy bottom in which it has its

course is so low-lying as to be undrainable and cannot be improved, so that it will probably always remain as now, a refuge for the sub-tropical animals, birds, reptiles and insects of Florida, which abound in its inmost recesses. Here flourishes the alligator, coming out to sun himself at mid-day on the logs and warm grassy lagoons at the edge of the stream, in just the kinds of places one would expect to find him. Yet the alligator is said to be a coward, rarely attacking, unless his retreat to water in which to hide himself is cut off. He thus becomes more a curiosity than a foe. These reptiles are hatched from eggs which the female deposits during the spring, in large numbers, in muddy places, where she digs out a spacious cavity, fills it with several hundred eggs, and covering them thickly with mud, leaves nature to do the rest. After a long incubation the little fellows come out and make a bee-line for the nearest water. The big alligators of the neighborhood have many breakfasts on the newly-born little ones, but some manage to grow up, after several years, to maturity, and exhibit themselves along this remarkable river.

It is almost impossible to conceive of the concentrated crookedness of the Ocklawaha and the difficulties of passage. It is navigated by stout and narrow flat-bottomed boats of light draft, constructed so as to quickly turn sharp corners, bump the shores and run on logs without injury. The river turns constantly at short intervals and doubles upon itself in

almost every mile, while the huge cypress trees often compress the water way so that a wider boat could not get through. There are many beautiful views in its course displaying the noble ranks of cypress trees rising as the stream bends along its bordering edge of swamps. Occasionally a comparatively straight river reach opens like the aisle of a grand building with the moss-hung cypress columns in long and sombre rows on either hand. At rare intervals fast land comes down to the stream bank, where there is some cultivation attempted for oranges and vegetables. Terrapin, turtles and water-fowl abound. When the passenger boat, after bumping and swinging around the corners, much like a ponderous tee-totum, halts for a moment at a landing in this swampy fastness, half-clad negroes usually appear, offering for sale partly-grown baby alligators, which are the prolific crop of the district. Various "Turkey bends," "Hell's half-acres," "Log Jams," "Bone Yards" and "Double S Bends" are passed, and at one place is the "Cypress Gate," where three large trees are in the way, and by chopping off parts of their roots, a passage about twenty feet wide had been secured to let the boats through. There are said to be two thousand bends in one hundred miles of this stream, and many of them are like corrugated circles, by which the narrow water way, in a mile or two of its course, manages to twist back to within a few feet of where it started At night, to aid the navigation,

the lurid glare of huge pine-knot torches, fitfully blazing, gives the scene a weird and unnatural aspect. The monotonous sameness of cypress trunks, sombre moss and twisting stream for many hours finally becomes very tiresome, but it is nevertheless a most remarkable journey of the strangest character possible in this country to sail down the Ocklawaha.

LOWER FLORIDA AND THE SEMINOLES.

South of the mouth of the Ocklawaha the St. John's River broadens into Lake George, the largest of its many lakes, a pretty sheet of water six to nine miles wide and twelve miles long. Volusia, the site of an ancient Spanish mission, is at the head of this lake, and the discharge from the swift but narrow stream above has made sand bars, so that jetties are constructed to deepen the channel. For a long distance the upper river is narrow and tortuous, with numerous islands and swamps, the dark coffee-colored water disclosing its origin; but the Blue Spring in one place is unique, sending out an ample and rich blue current to mix with the amber. Then Lake Monroe is reached, ten miles long and five miles wide, the head of navigation, by the regular lines of steamers, one hundred and seventy miles above Jacksonville. Here are two flourishing towns, Enterprise on the northern shore and Sanford on the southern, both popular winter resorts, and the latter having two thousand people. The St. John's extends

above Lake Monroe, a crooked, narrow, shallow stream, two hundred and fourteen miles farther southeastward to its source. The region through which it there passes is mostly a prairie with herds of cattle and much game, and is only sparsely settled. The upper river approaches the seacoast, being in one place but three miles from the lagoons bordering the Atlantic. To the southward of Lake Monroe are the winter resorts of Winter Park and Orlando, the latter a town of three thousand population. There are numerous lakes in this district, and then leaving the St. John's valley and crossing the watershed southward through the pine forests, the Okeechobee waters are reached, which flow down to that lake. This region was the home of a part of the Seminole Indians, and Tohopekaliga was their chief, whom they revered so highly that they named their largest lake in his honor. The Kissimmee River flows southward through this lake, and then traverses a succession of lakes and swamps to Lake Okeechobee, about two hundred miles southward by the water-line. Kissimmee City is on Lake Tohopekaliga, and extensive drainage operations have been conducted here and to the southward, reclaiming a large extent of valuable lands, and lowering the water-level in all these lakes and attendant swamps.

From Lake Tohopegalika through the tortuous water route to Lake Okeechobee, and thence by the Caloosahatchie westward to the Gulf of Mexico, is a

winding channel of four hundred and sixty miles, though in a direct line the distance is but one hundred and fifty miles. Okeechobee, the word meaning the "large water," covers about twelve hundred and fifty square miles, and almost all about it are the everglades or "grass water," the shores being generally a swampy jungle. This district for many miles is a mass of waving sedge grass eight to ten feet high above the water, and inaccessible excepting through narrow, winding and generally hidden channels. In one locality a few tall lone pines stand like sentinels upon Arpeika Island, formerly the home of the bravest and most dreaded of the Seminoles, and still occupied by some of their descendants. The name of the Seminole means the "separatist" or "runaway" Indians, they having centuries ago separated from the Creeks in Georgia and gone southward into Florida. From the days of De Soto to the time of their deportation in the nineteenth century the Spanish, British, French and Americans made war with these Seminole Indians. Gradually they were pressed southward through Florida. Their final refuge was the green islands and hummocks of the everglades, and they then clung to their last homes with the tenacity of despair. The greater part of this region is an unexplored mystery; the deep silence that can be actually felt, everywhere pervades; and once lost within the labyrinth, the adventurer is doomed unless rescued. Only the In-

dians knew its concealed and devious paths. On Arpeika Island the Cacique of the Caribs is said to have ruled centuries ago, until forced south out of Florida by the Seminoles. It was at times a refuge for the buccaneer with his plunder and a shrine for the missionary martyr who planted the Cross and was murdered beside it. This island was the last retreat of the Seminoles in the desultory war from 1835 to 1843, when they defied the Government, which, during eight years, spent $50,000,000 upon expeditions sent against them. Then the attempt to remove all of them was abandoned, and the remnant have since rested in peace, living by hunting and a little trading with the coast settlements. The names of the noted chiefs of this great race — Osceola, Tallahassee, Tohopekaliga, Coa-coo-chee and others — are preserved in the lakes, streams and towns of Florida. Most of the deported tribe were sent to the Indian Territory. There may be three or four hundred of them still in the everglades, peaceful, it is true, yet haughty and suspicious, and sturdily rejecting all efforts to educate or civilize them. They celebrate their great feast, the "Green Corn Dance," in late June; and they have unwavering faith in the belief that the time will yet come when all their prized everglade land will be theirs again, and the glory of the past redeemed, if not in this world, then in the next one, beyond the "Big Sleep."

WESTERN FLORIDA.

Westward from Jacksonville, a railway runs through the pine forests until it reaches the rushing Suwanee River, draining the Okifenokee swamp out to the Gulf, just north of Cedar Key. This stream is best known from the minstrel song, long so popular, of the *Old Folks at Home.* Beyond it the land rises into the rolling country of Middle Florida, the undulating surface sometimes reaching four hundred feet elevation, and presenting fertile soil and pleasant scenery, with a less tropical vegetation than the Peninsula of Florida. Here is Tallahassee, the capital of the State, one hundred and sixty-five miles from Jacksonville, a beautiful town of four thousand population, almost embedded in flowering plants, shrubbery and evergreens, and familiarly known from these beauties as the "Floral City," the gardens being especially attractive in the season of roses. The Capitol and Court-house and West Florida Seminary, set on a hill, are the chief public buildings. In the suburbs, at Monticello, lived Prince Achille Murat, a son of the King of Naples, who died in 1847, and his grave is in the Episcopal Cemetery. There are several lakes near the town, one of them the curious Lake Miccosukie, which contracts into a creek, finally disappearing underground. The noted Wakulla Spring, an immense limestone basin of great depth and volume of water,

with wonderful transparency, is fifteen miles southward.

Some distance to the westward the Flint and Chattahoochee Rivers join to form the Appalachicola River, flowing down to the Gulf at Appalachicola, a somewhat decadent port from loss of trade, its exports being principally lumber and cotton. The shallowness of most of these Gulf harbors, which readily silt up, destroys their usefulness as ports for deep-draft shipping. The route farther westward skirts the Gulf Coast, crosses Escambia Bay and reaches Pensacola, on its spacious harbor, ten miles within the Gulf. This is the chief Western Florida port, with fifteen thousand people, having a Navy Yard and much trade in lumber, cotton, coal and grain, a large elevator for the latter being erected in 1898. The Spaniards made this a frontier post in 1696, and the remains of their forts, San Miguel and San Bernardo, can be seen behind the town, while near the outer edge of the harbor is the old-time Spanish defensive battery, Fort San Carlos de Barrancos. The harbor entrance is now defended by Fort Pickens and Fort McRae. Pensacola Bay was the scene of one of the first spirited naval combats of the Civil War, when the Union forces early in 1862 recaptured the Navy Yard and defenses. The name of Pensacola was originally given by the Choctaws to the bearded Europeans who first settled there, and signifies the "hair people."

THE FLORIDA GULF COAST.

The coast of Florida on the Gulf of Mexico has various attractive places, reached by a convenient railway system. Homosassa is a popular resort about fifty miles southwestward from Ocala. A short distance in the interior is the locality where the Seminoles surprised and massacred Major Dade and his men in December, 1835, only three soldiers escaping alive to tell the horrid tale. The operations against these Indians were then mainly conducted from the military post of Tampa, and thither were taken for deportation the portions of the tribe that were afterwards captured, or who surrendered under the treaty. When Ferdinand de Soto entered this magnificent harbor on his voyage of discovery and gold hunting, he called it Espiritu Sancto Bay. It is from six to fifteen miles wide, and stretches nearly forty miles into the land, being dotted with islands, its waters swarming with sea-fowl, turtles and fish, deer abounding in the interior and on some of the islands, and there being abundant anchorage for the largest vessels. This is the great Florida harbor and the chief winter resort on the western coast. It was the main port of rendezvous and embarkation for the American forces in the Spanish War of 1898. The head of the harbor divides into Old Tampa and Hillsborough Bays, and on the latter and at the mouth of Hillsborough River is the city, numbering about

twenty-five thousand inhabitants. The great hotels are surrounded by groves with orange and lemon trees abounding, and everything is invoked that can add to the tourist attractions. The special industry of the resident population is cigar-making. Port Tampa is out upon the Peninsula between the two bays, several miles below the city, and a long railway trestle leads from the shore for a mile to deep water. Upon the outer end of this long wharf is Tampa Inn, built on a mass of piles, much like some of the constructions in Venice. The guests can almost catch fish out of the bedroom windows, and while eating breakfast can watch the pelican go fishing in the neighboring waters, for this queer-looking bird, with the duck and gull, is everywhere seen in these attractive regions. An outer line of keys defends Tampa harbor from the storms of the Gulf. There are many popular resorts on the islands and shores of Tampa Bay, and regular lines of steamers are run to the West India ports, Mobile and New Orleans. All the surroundings are attractive, and a pleased visitor writes of the place: "Conditions hereabouts exhilarate the men; a perpetual sun and ocean breeze are balm to the invalid and an inspiration to a robust health. The landscape affords uncommon diversion, and the sea its royal sport with rod and gaff."

Farther down the coast is Charlotte Harbor, also deeply indented and sheltered from the sea by various outlying islands. It is eight to ten miles long and

extends twenty-five miles into the land, having valuable oyster-beds and fisheries, and its port is Punta Gorda. Below this is the projecting shore of Punta Rassa, where the outlet of Lake Okeechobee, the Caloosahatchie River, flows to the sea, having the military post of Fort Myers, another popular resort, a short distance inland, upon its bank. The Gulf Coast now trends to the southeast, with various bays, in one of which, with Cape Romano as the guarding headland, is the archipelago of "the ten thousand islands," while below is Cape Sable, the southwestern extremity of Florida. To the southward, distant from the shore, are the long line of Florida Keys, the name coming from the Spanish word *cayo*, an island. This remarkable coral formation marks the northern limit of the Gulf Stream, where it flows swiftly out to round the extremity of the Peninsula and begin its northern course through the Atlantic Ocean. Although well lighted and charted, the Straits of Florida along these reefs are dangerous to navigate and need special pilots. Nowhere rising more than eight to twelve feet above the sea, the Keys thus low-lying are luxuriantly covered with tropical vegetation. From the Dry Tortugas at the west, around to Sand's Key at the entrance to Biscayne Bay, off the Atlantic Coast, about two hundred miles, is a continuous reef of coral, upon the whole extent of which the little builder is still industriously working. The reef is occasionally broken by channels of vary-

ing depth, and within the outer line are many habitable islands. The whole space inside this reef is slowly filling up, just as all the Keys are also slowly growing through accretions from floating substances becoming entangled in the myriad roots of the mangroves. The present Florida Reef is a good example of the way in which a large part of the Peninsula was formed. No less than seven old coral reefs have been found to exist south of Lake Okeechobee, and the present one at the very edge of the deep water of the Gulf Stream is probably the last that can be formed, as the little coral-builder cannot live at a greater depth than sixty feet. The Gulf Stream current is so swift and deep along the outer reef that there is no longer a foundation on which to build.

The Gulf Stream is the best known of all the great ocean currents. The northeast and southeast trade-winds, constantly blowing, drive a great mass of water from the Atlantic Ocean into the Caribbean Sea, and westward through the passages between the Windward Islands, which is contracted by the converging shores of the Yucatan Peninsula and the Island of Cuba, so that it pours between them into the Gulf of Mexico, raising its surface considerably above the level of the Atlantic. These currents then move towards the Florida Peninsula, and pass around the Florida Reef and out into the Atlantic. It is estimated by the Coast Survey that the hourly flow

of the Gulf Stream past the reef is nearly ninety thousand million tons of water, the speed at the surface of the axis of the stream being over three and one-half miles an hour. To conceive what the immensity of this flow means, it is stated that if a single hour's flow of water were evaporated, the salt thus produced would require to carry it one hundred times the number of ocean-going vessels now afloat. The Gulf Stream water is of high temperature, great clearness and a deep blue color; and when it meets the greener waters of the Atlantic to the northward, the line of distinction is often very well defined. At the exit to the Atlantic below Jupiter Inlet the stream is forty-eight miles wide to Little Bahama Bank, and its depth over four hundred fathoms.

There are numerous harbors of refuge among the Florida Keys, and that at Key West is the best. This is a coral island seven miles long and one to two miles broad, but nowhere elevated more than eleven feet above the sea. Its name, by a free translation, comes from the original Spanish name of *Cayo Hueso*, or the Bone Island, given because the early mariners found human bones upon it. Here are twenty thousand people, mostly Cubans and settlers from the Bahamas, the chief industry being cigar-making, while catching fish and turtles and gathering sponges also give much employment. There are no springs on the island, and the inhabitants are dependent on rain or distillation for water.

The air is pure and the climate healthy, the trees and shrubbery, with the residences embowered in perennial flowers, giving the city a picturesque appearance. Key West has a good harbor, and as it commands the gateway to and from the Gulf near the western extremity of the Florida coral reef, it is strongly defended, the prominent work being Fort Taylor, constructed on an artificial island within the main harbor entrance. The little Sand Key, seven miles to the southwest, is the southernmost point of the United States. Forty miles to the westward is the group of ten small, low and barren islands known as the Dry Tortugas, from the Spanish *tortuga*, a tortoise. Upon the farthest one, Loggerhead Key, stands the great guiding light for the Florida Reef, of which this is the western extremity, the tower rising one hundred and fifty feet. Fort Jefferson is on Garden Key, where there is a harbor, and in it were confined various political prisoners during the Civil War, among them some who were concerned in the conspiracy to assassinate President Lincoln.

Here, with the encircling waters of the Gulf all around us, terminates this visit to the Sunny South. As we have progressed, the gradual blending of the temperate into the torrid zone, with the changing vegetation, has reminded of Bayard Taylor's words:

"There, in the wondering airs of the Tropics,
Shivers the Aspen, still dreaming of cold:
There stretches the Oak from the loftiest ledges,

His arms to the far-away lands of his brothers,
And the Pine tree looks down on his rival, the Palm."

And as the journey down the Florida Peninsula has displayed some of the most magnificent winter resorts of the American Riviera, with their wealth of tropical foliage, fruits and flowers, and their seductive and balmy climate, this too has reminded of Cardinal Damiani's glimpse of the "Joys of Heaven":

"Stormy winter, burning summer, rage within these regions never,
But perpetual bloom of roses and unfading spring forever;
Lilies gleam, the crocus glows, and dropping balms their scents deliver."

Along this famous peninsula the sea rolls with ceaseless beat upon some of the most gorgeous beaches of the American coast. To the glories of tropical vegetation and the charms of the climate, Florida thus adds the magnificence of its unrivalled marine environment. Everywhere upon these pleasant coasts—

"The bridegroom, Sea,
Is toying with his wedded bride,—the Shore.
He decorates her shining brow with shells,
And then retires to see how fine she looks,
Then, proud, runs up to kiss her."

TRAVERSING THE PRAIRIE LAND.

VI.

TRAVERSING THE PRAIRIE LAND.

The Northwest Territory—Beaver River—Fort McIntosh—Mahoning Valley—Steubenville—Youngstown—Canton—Massillon—Columbus—Scioto River—Wayne Defeats the Miamis—Sandusky River—Findlay—Natural Gas Fields—Fort Wayne—Maumee River—The Little Turtle—Old Tippecanoe—Tecumseh—Battle of Tippecanoe—Harrison Defeats the Prophet—Tecumseh Slain in Canada—Indianapolis—Wabash River—Terre Haute—Illinois River—Springfield—Lincoln's Home and Tomb—Peoria—The Great West—Lake Erie—Tribe of the Cat—Conneaut—The Western Reserve—Ashtabula—Mentor—Cleveland—Cuyahoga River—Moses Cleaveland—Euclid Avenue—Oberlin—Elyria—The Fire Lands—Sandusky—Put-in-Bay Island—Perry's Victory—Maumee River—Toledo—South Bend—Chicago—The Pottawatomies—Fort Dearborn—Chicago Fire—Lake Michigan—Chicago River—Drainage Canal—Lockport—Water Supply—Fine Buildings, Streets and Parks—University of Chicago—Libraries—Federal Steel Company—Great Business Establishments—Union Stock Yards—The Hog—The Board of Trade—Speculative Activity—George M. Pullman—The Sleeping Car—The Pioneer—Town of Pullman—Agricultural Wealth of the Prairies—The Corn Crop—Whittier's Corn Song.

THE NORTHWEST TERRITORY.

Beyond the Allegheny ranges, which are gradually broken down into their lower foothills, and then to an almost monotonous level, the expansive prairie lands stretch towards the setting sun. From their prolific agriculture has come much of the wealth and pros-

perity of the United States. The rivers flowing out of the mountains seek the Mississippi Valley, thus reaching the sea through the Great Father of Waters. Among these rivers is the Ohio, and at its confluence with the Beaver, near the western border of Pennsylvania, was, in the early days, the Revolutionary outpost of Fort McIntosh, a defensive work against the Indians. All about is a region of coal and gas, extending across the boundary into the Mahoning district of Ohio, the Mahoning River being an affluent of the Beaver. Numerous railroads serve its many towns of furnaces and forges. To the southward is Steubenville on the Ohio, and to the northward Youngstown on the Mahoning, both busy manufacturing centres. Salem and Alliance are also prominent, and some distance northwest is Canton, a city of thirty thousand people, in a fertile grain district, the home of President William McKinley. Massillon, upon the pleasant Tuscarawas River, in one of the most productive Ohio coal-fields, preserves the memory of the noted French missionary priest, Jean Baptiste Massillon, for all this region was first traversed, and opened to civilization, by the French religious explorers from Canada who went out to convert the Indians.

In the centre of the State of Ohio is the capital, Columbus, built on the banks of the Scioto River, a tributary of the Ohio flowing southward and two hundred miles long. This river receives the Olen-

tangy or Whetstone River at Columbus, in a region of great fertility, which is in fact the characteristic of the whole Scioto Valley. The Ohio capital, which has a population of one hundred and twenty thousand, large commerce and many important manufacturing establishments, dates from 1812, and became the seat of the State Government in 1816. The large expenditures of public money upon numerous public institutions, all having fine buildings, the wide, tree-shaded streets, and the many attractive residences, have made it one of the finest cities in the United States. Broad Street, one hundred and twenty feet wide, beautifully shaded with maples and elms, extends for seven miles. The Capitol occupies a large park surrounded with elms, and is an impressive Doric building of gray limestone, three hundred and four feet long and one hundred and eighty-four feet wide, the rotunda being one hundred and fifty-seven feet high. There are fine parks on the north, south and east of the city, the latter containing the spacious grounds of the Agricultural Society. Almost all the Ohio State buildings, devoted to its benevolence, justice or business, have been concentrated in Columbus, adding to its attractions, and it is also the seat of the Ohio State University with one thousand students. Railroads radiate in all directions, adding to its commercial importance.

In going westward, the region we are traversing beyond the Pennsylvania boundary gradually changes

from coal and iron to a rich agricultural section. As we move away from the influence of the Allegheny ranges, the hills become gentler, and the rolling surface is more and more subdued, until it is smoothed out into an almost level prairie, heavily timbered where not yet cleared for cultivation. This was the Northwest Territory, first explored by the French, who were led by the Sieur de la Salle in his original discoveries in the seventeenth century. The French held it until the conquest of Canada, when that Dominion and the whole country west to the Mississippi River came under the British flag by the treaty of 1763. After the Revolution, the various older Atlantic seaboard States claiming the region, ceded sovereignty to the United States Government, and then its history was chequered by Indian wars until General Wayne conducted an expedition against the Miamis and defeated them in 1794, after which the Northwest Territory was organized, and the State of Ohio taken out of it and admitted to the Union in 1803, its first capital being Chillicothe. It was removed to Zanesville for a couple of years, but finally located at Columbus.

Beyond the Scioto the watershed is crossed, by which the waters of the Ohio are left behind and the valley of Sandusky River is reached, a tributary of Lake Erie. Here is Bucyrus, in another prolific natural gas region, the centre of which is Findlay. At this town, in 1887, the inhabitants, who had then

UPPER YOSEMITE FALLS

had just one year of natural gas development, spent three days in exuberant festivity, to show their appreciation of the wonderful discovery. They had thirty-one gas wells pouring out ninety millions of cubic feet in a day, all piped into town and feeding thirty thousand glaring natural gas torches of enormous power, which blew their roaring flames as an accompaniment to the oratory of John Sherman and Joseph B. Foraker, who were then respectively Senator and Governor of Ohio. The soldiers and firemen paraded, and a multitude of brass bands tried to drown the Niagara of gas which was heard roaring five miles away, while the country at night was illuminated for twenty miles around. But the wells have since diminished their flow, although the gas still exists; while another field with a prolific yield is in Fairfield County, a short distance southeast of Columbus. Over the State boundary in Indiana is yet another great gas-field covering five thousand square miles in a dozen counties, with probably two thousand wells and a yield which has reached three thousand millions of cubic feet in a day. This gas supplies many cities and towns, including Chicago, and it is one of the greatest gas-fields known. In the same region there are also large petroleum deposits.

Not far beyond the State boundary is Fort Wayne, the leading city of Northern Indiana, having forty thousand population, an important railway centre, and prominent also in manufactures. It stands in a fer-

tile agricultural district, and being located at the highest part of the gentle elevation, beyond the Sandusky Valley, diverting the waters east and west, it is appropriately called the "Summit City." Here the Maumee River is formed by the confluence of the two streams St. Joseph and St. Mary, and flows through the prairie towards the northeast, to make the head of Lake Erie. The French, under La Salle, in the eighteenth century established a fur-trading post here, and erected Fort Miami, and in 1760 the British penetrated to this then remote region and also built a fort. During the Revolution this country was abandoned to the Indians, but when General Wayne defeated the Miamis in 1794 he thought the place would make a good frontier outpost to hold the savages in check, and he then constructed a strong work, to which he gave the name of Fort Wayne. Around this post the town afterwards grew, being greatly prospered by the Wabash and Erie Canal, and by the various railways subsequently constructed in all directions. All this prairie region was the hunting-ground of the Miamis, whose domain extended westward to Lake Michigan, and southward along the valley of the Miami River to the Ohio. They were a warlike and powerful tribe, and their adherence to the English during the Revolution provoked almost constant hostilities with the settlers who afterwards came across the mountains to colonize the Northwest Territory. Under the leader-

ship of their renowned chief Mishekonequah, or the "Little Turtle," they defeated repeated expeditions sent against them, until finally beaten by Wayne. Subsequently they dwindled in importance, and when removed farther west, about 1848, they numbered barely two hundred and fifty persons.

OLD TIPPECANOE.

Some distance westward is the Tippecanoe River, a stream flowing southwest into the Wabash, and thence into the Ohio. The word Tippecanoe is said to mean "the great clearing," and on this river was fought the noted battle by "Old Tippecanoe," General William Henry Harrison, against the combined forces of the Shawnees, Miamis and several other tribes, which resulted in their complete defeat. They were united under Elskwatawa, or the "Prophet," the brother of the famous Tecumseh. These two chieftains were Shawnees, and they preached a crusade by which they gathered all the northwestern tribes in a concerted movement to resist the steady encroachments of the whites. The brother, who was a "medicine man," in 1805 set up as an inspired prophet, denouncing the use of liquors, and of all food, manners and customs introduced by the hated "palefaces," and confidently predicted they would ultimately be driven from the land. For years both chiefs travelled over the country stirring up the Indians. General Harrison, who was the Governor of

the Northwest Territory, gathered his forces together and advanced up the Wabash against the Prophet's town of Tippecanoe, when the Indians, hoping to surprise him, suddenly attacked his camp, but he being prepared, they were signally defeated, thus giving Harrison his popular title of "Old Tippecanoe," which had much to do with electing him President in 1840. Some time after this defeat the War of 1812 broke out, when Tecumseh espoused the English cause, went to Canada with his warriors, and was made a brigadier-general. He was killed there in the battle of the Thames, in Ontario Province, and it is said had a premonition of death, for, laying aside his general's uniform, he put on a hunting-dress and fought desperately until he was slain. Tecumseh was the most famous Indian chief of his time, and the honor of killing him was claimed by several who fought in the battle, so that the problem of "Who killed Tecumseh?" was long discussed throughout the country.

The State of Indiana was admitted into the Union in 1816, and in its centre, built upon a broad plain, on the east branch of White River, is its capital and largest city, Indianapolis, having two hundred thousand population. This is a great railway centre, having lines radiating in all directions, and it also has extensive manufactures and a large trade in live stock. The city plan, with wide streets crossing at right angles, and four diagonal avenues radiating

from a circular central square, makes it very attractive; and the residential quarter, displaying tasteful houses, ornate grounds and shady streets, is regarded as one of the most beautiful in the country. The State Capitol, in a spacious park, is a Doric building with colonnade, central tower and dome, and in an enclosure on its eastern front is erected one of the finest Soldiers' and Sailors' Monuments existing, rising two hundred and eighty-five feet, out-topping everything around, having been designed and largely constructed in Europe. There are also many prominent public buildings throughout the city. Indianapolis, first settled in 1819, had but a small population until the railways centred there, the Capitol being removed from Corydon in 1825. The Wabash River, to which reference has been made, receives White River, and is one of the largest affluents of the Ohio, about five hundred and fifty miles long, being navigable over half that length. It rises in the State of Ohio, flows across Indiana, and, turning southward, makes for a long distance the Illinois boundary. Its chief city is Terre Haute, the "High Ground," about seventy miles west of Indianapolis, another prominent railroad centre, having forty-five thousand people, with extensive manufactures. It is surrounded by valuable coal-fields, is built upon an elevated plateau, and, like all these prairie cities, is noted for its many broad and well-shaded streets. It was founded in 1816.

THE GREAT WEST.

Progressing westward, the timbered prairie gradually changes to the grass-covered prairie, spreading everywhere a great ocean of fertility. Across the Wabash is the "Prairie State" of Illinois, its name coming from its principal river, which the Indians named after themselves. The word is a French adaptation of the Indian name "Illini," meaning "the superior men," the earliest explorers and settlers having been French, the first comers on the Illinois River being Father Marquette and La Salle. At the beginning of the eighteenth century their little settlements were flourishing, and the most glowing accounts were sent home, describing the region, which they called "New France," on account of its beauty, attractiveness and prodigious fertility, as a new Paradise. There were many years of Indian conflicts and hostility, but after peace was restored and a stable government established, population flowed in, and Illinois was admitted as a State to the Union in 1818. The capital was established at Springfield in 1837, an attractive city of about thirty thousand inhabitants, built on a prairie a few miles south of Sangamon River, a tributary of the Illinois, and from its floral development and the adornment of its gardens and shade trees, Springfield is popularly known as the "Flower City." There is a magnificent State Capitol with high surmounting dome, pat-

terned somewhat after the Federal Capitol at Washington. Springfield has coal-mines which add to its prosperity, but its great fame is connected with Abraham Lincoln. He lived in Springfield, and the house he occupied when elected President has been acquired by the State and is on public exhibition. After his assassination in 1865, his remains were brought from Washington to Springfield, and interred in the picturesque Oak Ridge Cemetery, in the northern suburbs, where a magnificent monument was erected to his memory and dedicated in 1874. About sixty miles north of Springfield, the Illinois River expands into Peoria Lake, and here came La Salle down the river in 1680, and at the foot of the lake established a trading-post and fort, one of the earliest in that region. When more than a century had elapsed, a little town grew there which is now the busy industrial city of Peoria, famous for its whiskey and glucose, and turning out products that annually approximate a hundred millions, furnishing vast traffic for numerous railroads. It is the chief city of the "corn belt," and is served by all the prominent trunk railway lines.

Like the pioneers of a hundred years ago, we have left the Atlantic seaboard, crossed the Allegheny Mountains and entered the expansive "Northwest Territory," which in the first half of the nineteenth century was the Mecca of the colonist and frontiersman. This was then the region of the "Great

West," though that has since moved far beyond the Mississippi. Its agricultural wealth made the prosperity of the country for many decades, and its prodigious development was hardly realized until put to the test of the Civil War, when it poured out the men and officers, and had the staying qualities so largely contributing to the result of that great conflict. Gradually overspread by a network of railways, the numerous "cross-roads" have expanded everywhere into towns and cities, almost all patterned alike, and all of them centres of rich farming districts. Coal, oil and gas have come to minister to its manufacturing wants, and thus growing into mature Commonwealths, this prolific region in the later decades has been itself, in turn, contributing largely to the tide of migration flowing to the present "Great Northwest," a thousand miles or more beyond. It presents a rich agricultural picture, but little scenic attractiveness. Everywhere an almost dead level, the numerous railways cross and recross the surface in all directions at grade, and are easily built, it being only necessary to dig a shallow ditch on either side, throw the earth in the centre, and lay the ties and rails. Nature has made the prairie as smooth as a lake, so that hardly any grading is necessary, and the region of expansive green viewed out of the car window has been aptly described as having "a face but no features," when one looks afar over an ocean of waving verdure.

LAKE ERIE.

This vast prairie extends northward to and beyond the Great Lakes, and it is recorded that in the early history of the proposed legislation for the "Northwest Territory," Congress gravely selected as the names of the States which were to be created out of it such ponderous conglomerates as "Metropotamia," "Assenispia," "Pelisipia" and "Polypotamia," titles which happily were long ago permitted to pass into oblivion. Northward, in Ohio, the region stretches to Lake Erie, the most southern and the smallest of the group of Great Lakes above Niagara. It is regarded as the least attractive lake, having neither romances nor much scenery. Yet, from its favorable position, it carries an enormous commerce. It is elliptical in form, about two hundred and forty miles long and sixty miles broad, the surface being five hundred and sixty-five feet above the ocean level. It is a very shallow lake, the depth rarely exceeding one hundred and twenty feet, excepting at the lower end, while the other lakes are much deeper, and in describing this difference of level it is said that the surplus waters poured from the vast *basins* of Superior, Michigan and Huron, flow across the *plate* of Erie into the deep *bowl* of Ontario. This shallowness causes it to be easily disturbed, so that it is the most dangerous of these fresh-water seas, and it has few harbors, and those very poor, especially upon the

southern shore. The bottom of the lake is a light, clayey sediment, rapidly accumulated from the wearing away of the shores, largely composed of clay strata. The loosely-aggregated products of these disintegrated strata are frequently seen along its coast, forming cliffs extending back into elevated plateaus, through which the rivers cut deep channels. Their mouths are clogged by sand-bars, and dredging and breakwaters have made the harbors on the southern shore, around which have grown the chief towns—Dunkirk, Erie, Ashtabula, Cleveland, Sandusky and Toledo. The name of Lake Erie comes from the Indian "tribe of the Cat," whom the French called the "Chats," because their early explorers, penetrating to the shores of the lake, found them abounding in wild cats, and thus they gave the same name to the cats and the savages. In their own parlance, these Indians were the "Eries," and in the seventeenth century they numbered about two thousand warriors. In 1656 the Iroquois attacked and almost annihilated them.

The Lake Erie ports in the "Buckeye State" of Ohio, so called from the buckeye tree, are chiefly harbors for shipping coal and receiving ores from the upper lakes, their railroads leading to the great industrial centres to the southward. Near the eastern boundary of Ohio is Conneaut, on the bank of a wide and deep ravine, formed by a small river, broadening into a bay at the shore of the lake, the name mean-

ing "many fish." Here landed in 1796 the first settlers from Connecticut, who entered the "Western Reserve," as all this region was then called. On July 4th of that year, celebrating the national anniversary, "they pledged each other in tin cups of lake water, accompanied by a salute of fowling-pieces," and the next day began building the first house on the Reserve, constructed of logs, and long known as "Stow Castle." Conneaut is consequently known as the "Plymouth of the Western Reserve," as here began the settlements made by the Puritan New England migration to Ohio. On deep ravines making their harbors are Ashtabula, an enormous *entrepôt* for ores, and a few miles farther westward, Painesville, on Grand River, named for Thomas Paine. Beyond is Mentor, the home of the martyred President Garfield, whose large white house stands near the railway. All along here, the southern shore of Lake Erie is a broad terrace at eighty to one hundred feet elevation above the water, while farther inland is another and considerably higher plateau. Each sharp declivity facing northward seems at one time to have been the actual shore of the lake when its surface before the waters receded was much higher than now. The outer plateau having once been the overflowed lake bed, is level, excepting where the crooked but attractive streams have deeply cut their winding ravines down through it to reach Lake Erie.

THE CITY OF CLEVELAND.

Thus we come to Cleveland, the second city in Ohio, having four hundred thousand people, and extensive manufacturing industries. It is the capital of the "Western Reserve" and the chief city of Northern Ohio, its commanding position upon a high bluff, falling off precipitously to the edge of the water, giving it the most attractive situation on the shore of Lake Erie. Shade trees embower it, including many elms planted by the early settlers, who learned to love them in New England, and hence it delights in the popular title of the "Forest City." Were not the streets so wide, the profusion of foliage might make Cleveland seem like a town in the woods. The little Cuyahoga River, its name meaning "the crooked stream," flows with wayward course down a deeply washed and winding ravine, making a valley in the centre of the city, known as "the Flats," and this, with the tributary ravines of some smaller streams, is packed with factories and foundries, oil refineries and lumber mills, their chimneys keeping the business section constantly under a cloud of smoke. Railways run in all directions over these flats and through the ravines, while, high above, the city has built a stone viaduct nearly a half-mile long, crossing the valley. Here are the great works of the Standard Oil Company, controlling that trade, and several of the petroleum magnates have their palaces in the city.

Old Moses Cleaveland, a shrewd but unsatisfied Puritan of the town of Windham, Connecticut, became the agent of the Connecticut Lead Company, who brought out the first colony in 1796 that landed at Conneaut. They explored the lake shore, and selecting as a good location the mouth of Cuyahoga River, Moses wrote back to his former home that they had found a spot "on the bank of Lake Erie which was called by my name, and I believe the child is now born that may live to see that place as large as old Windham." In little over a century the town has grown far beyond his wildest dreams, although it did not begin to expand until the era of canals and railways, and it was not so long ago that the people in grateful memory erected a bronze statue of the founder. One of the local antiquaries, delving into the records, has found why various original settlers made their homes at Cleveland. He learned that "one man, on his way farther West, was laid up with the ague and had to stop; another ran out of money and could get no farther; another had been to St. Louis and wanted to get back home, but saw a chance to make money in ferrying people across the river; another had $200 over, and started a bank; while yet another thought he could make a living by manufacturing ox-yokes, and he stayed." This earnest investigator continues: "A man with an agricultural eye would look at the soil and kick his toe into it, and then would shake his head and de-

clare that it would not grow white beans—but he knew not what this soil would bring forth; his hope and trust was in beans, he wanted to know them more, and wanted potatoes, corn, oats and cabbage, and he knew not the future of Euclid Avenue."

On either side of the deep valley of "the Flats" stretch upon the plateau the long avenues of Cleveland, with miles of pleasant residences, surrounded by lawns and gardens, each house isolated in green, and the whole appearing like a vast rural village more than a city. This pleasant plan of construction had its origin in the New England ideas of the people. Yet the city also has a numerous population of Germans, and it is recorded that one of the early landowners wrote, in explaining his project of settlement: "If I make the contract for thirty thousand acres, I expect with all speed to send you fifteen or twenty families of prancing Dutchmen." These Teutons came and multiplied, for the original Puritan stock can hardly be responsible for the vineyards of the neighborhood, the music and dancing, and the public gardens along the pleasant lake shore, where the crowds go, when work is over, to enjoy recreation and watch the gorgeous summer sunsets across the bosom of the lake which are the glory of Cleveland. Upon the plateau, the centre of the city, is the Monumental Park, where stand the statue of Moses Cleaveland, the founder, who died in 1806, and a fine Soldiers' Monument, with also a statue of Commodore

Perry. This Park is an attractive enclosure of about ten acres, having fountains, gardens, monuments and a little lake, and it is intersected at right angles by two broad streets, and surrounded by important buildings. One of the streets is the chief business highway, Superior Street, and the other leads down to the edge of the bluff on the lake shore, where the steep slope is made into a pleasure-ground, with more flower-beds and fountains and a pleasant outlook over the water, although at its immediate base is a labyrinth of railroads and an ample supply of smoke from the numerous locomotives. A long breakwater protects the harbor entrance, and out under the lake is bored the water-works tunnel.

There extends far to the eastward, from a corner of the Monumental Park, Cleveland's famous street—Euclid Avenue. The people regard it as the handsomest highway in America, in the combined magnificence of houses and grounds. It is a level avenue of about one hundred and fifty feet width, with a central roadway and stone footwalks on either hand, shaded by rows of grand overarching elms, and bordered on both sides by well-kept lawns. This is the public highway, every part being kept scrupulously neat, while a light railing marks the boundary between the street and the private grounds. For a long distance this noble avenue is bordered by stately residences, each surrounded by ample gardens, the stretch of grass, flowers and foliage extending back

from one hundred to four hundred feet between the street and the buildings. Embowered in trees, and with all the delights of garden and lawn seen in every direction, this grand avenue makes a delightful driveway and promenade. Upon it live the multi-millionaires of Cleveland, the finest residences being upon the northern side, where they have invested part of the profits of their railways, mills, mines, oil wells and refineries in adorning their homes and ornamenting their city. This splendid boulevard, in one way, is a reproduction of the Parisian Avenue of the Champs Elysées and its gardens, but with more attractions in the surroundings of its bordering rows of palaces. Here live the men who vie with those of Chicago in controlling the commerce of the lakes and the affairs of the Northwest. Plenty of room and an abundance of income are necessary to provide each man, in the heart of the city, with two to ten acres of lawns and gardens around his house, but it is done here with eminent success. About four miles out is the beautiful Wade Park, opposite which are the handsome buildings of the Western Reserve University, having, with its adjunct institutions, a thousand students. Beyond this, the avenue ends at the attractive Lake View Cemetery, where, on the highest part of the elevated plateau, with a grand outlook over Lake Erie, is the grave of the assassinated President Garfield. His imposing memorial rises to a height of one hundred and sixty-five feet.

CLEVELAND TO CHICAGO.

Thirty-five miles southwest of Cleveland, and some distance inland from Lake Erie, is Oberlin, where, in a fertile and prosperous district, is the leading educational foundation of Northern Ohio—Oberlin College—named in memory of the noted French philanthropist, and established in 1833 by the descendants of the Puritan colonists, to carry out their idea of thorough equality in education. It admits students without distinction of sex or color, and has about thirteen hundred, almost equally divided between the sexes, occupying a cluster of commodious buildings. To the westward is the beautiful ravine of Black River, which gets out to the lake by falling over a rocky ledge in two streams, and on the peninsula formed by its forks is the town of Elyria. Maria Ely was the wife of the founder of the settlement, who named it after her in this peculiar reversible way. This romantic stream bounds the "Fire Lands" of the Western Reserve, a tract of nearly eight hundred square miles abutting on the lake shore, which Connecticut set apart for colonization by her people, who had been sufferers from destructive fires in the towns of New London, Fairfield and Norwalk on Long Island Sound. They secured this wilderness in the early part of the nineteenth century, and their chief town is Sandusky, with twenty-five thousand population. Here lived most

of the Eries, the Indian "tribe of the Cat," who fished in Sandusky Bay, its upper waters being an archipelago of little green islands abounding with water fowl. They were known to the adjoining tribes as the "Neutral Nation," for they maintained two villages of refuge on Sandusky River, between the warlike Indians of the east and the west, and whoever entered their boundaries was safe from pursuit, the sanctuary being rigidly observed. The early French missionaries who found them in the seventeenth century speak of these anomalous villages among the savages as having then been long in existence.

The name of Sandusky is a corruption of a Wyandot word meaning "cold-water pools," the French having originally rendered it as Sandosquet. The shores are low, but there is a good harbor and much trade, and here is located the Ohio State Fish Hatchery. The railroads are laid among the savannahs and lagoons, and one of the suburban stations has been not inaptly named Venice. There are extensive vineyards on the flat and sunny shores of the bay, and this is one of the most prolific grape districts in the State. Sandusky Bay is a broad sheet of water, in places six miles wide, and about twenty miles long. Sandusky has a large timber trade, being noted for the manufacture of hard woods. Out beyond the bold peninsula, protruding into the lake at the entrance to the bay, is a group of islands

spreading over the southwestern waters of Lake Erie, of which Kelly's Island is the chief, an archipelago formed largely from the *detritus* washed out of the Detroit, Maumee and various other rivers flowing into the head of the lake. Here the Erie Indians had a fortified stronghold, whose outlines can still be traced. The most noted of the group is Put-in-Bay Island, now a popular watering-place, which got its name from Commodore Perry, who "put in" there with the captured British fleet at the naval battle of Lake Erie, September 10, 1813. It was from this place, just after his victory, that he sent the historic despatch, giving him fame, "We have met the enemy and they are ours." The killed of both fleets were buried side by side near the beach on the island, the place being marked by a mound. The lovely sheet of water of Put-in-Bay glistens in front, having the towns of villa-crowned Gibraltar Island upon its surface. Vineyards and roses abound, these islands, like the adjacent shores, being noted for their wines.

The Maumee River, coming up from Fort Wayne, flows into the head of Lake Erie, the largest stream on its southern coast. It comes from the southwest through the region of the "Black Swamp," a vast district, originally morass and forest, which has been drained to make a most fertile country. This "miserable bog," as the original settlers denounced it, when they were jolted over the rude corduroy roads

that sustained them upon the quaking morass, has since become the "prolific garden" and "magnificent forest" described by the modern tourist. The Maumee Valley was an almost continual battle-ground with the Indians when "Mad Anthony Wayne" commanded on that frontier, he being called by them the "Wind," because "he drives and tears everything before him." For a quarter of a century border warfare raged along this river, then known as the "Miami of the Lakes," and its chief settlement, Toledo, passed its infancy in a baptism of blood and fire. It was at the battle of Fallen Timbers, fought in 1794, almost on the site of Toledo, that Wayne gave his laconic and noted "field orders." General William Henry Harrison, then his aide, told Wayne just before the battle he was afraid he would get into the fight and forget to give "the necessary field orders." Wayne replied: "Perhaps I may, and if I do, recollect that the standing order for the day is, charge the rascals with the bayonets." Toledo is built on the flat surface on both sides of the Maumee River and Bay, which make it a good harbor, stretching six miles down to Lake Erie. There are a hundred thousand population here, and this energetic reproduction of the ancient Spanish city has named its chief newspaper the *Toledo Blade*. The city has extensive railway connections and a large trade in lumber and grain, coal and ores, and does much manufacturing, it being well served with natu-

ral gas. A dozen grain elevators line the river banks, and the factory smokes overhang the broad low-lying city like a pall. To the westward, crossing the rich lands of the reclaimed swamp, is the Indiana boundary, that State being here a broad and level prairie, which also stretches northward into Michigan. The chief town of Northern Indiana is South Bend, named from the sweeping southern bend of St. Joseph River, on which it is built. This stream rises in Michigan, and flows for two hundred and fifty miles over the prairie, going down into Indiana and then back again to empty into Lake Michigan. South Bend is noted for its carriage- and wagon-building factories, and has several flourishing Roman Catholic institutions, generally of French origin. To the westward spreads the level prairie, with scant scenic attractions, though rich in agriculture, to the shores of Lake Michigan, being gridironed with railways as Chicago is approached.

THE GREAT CITY OF THE LAKES.

The second city in the United States, with a population approximating two millions, Chicago, the metropolis of the prairies, seems destined for unlimited growth. It has absorbed all the outlying towns, and now embraces nearly two hundred square miles. It has a water-front on Lake Michigan of twenty-six miles, and its trade constantly grows. It pushes ahead with boundless energy, attracting the shrewd-

est men of the West to take part in its vast and profitable enterprises, and is in such a complete manner the depot and storehouse for the products and supplies of goods for the enormous prairie region around it, and for the entire Northwest, and the country out to the Rocky Mountains and Pacific Ocean, that other Western cities cannot displace or even hope to rival it. Yet it is a youthful giant, of quick and marvellous development, but few of its leading spirits having been born within its limits, nearly all being attracted thither by its paramount advantages. The prominent characteristics of Chicago are an overhanging pall of smoke; streets crowded with quick-moving, busy people; a vast aggregation of railways, vessels, elevators and traffic of all kinds; a polyglot population drawn from almost all races; and an earnest devotion to the almighty dollar. Its name came from the river, and is of Indian origin, regarded as probably a corruption of "Cheecagua," the title of a dynasty of chiefs who controlled the country west and south of Lake Michigan. This also was a word applied in the Indian dialect to the wild onion growing luxuriantly on the banks of the river, and they gave a similar name to the thunder which they believed the voice of the Great Spirit, and to the odorous animal abounding in the neighborhood that the white man knew as the "polecat." These were rather incongruous uses for the same word, but the suggestion

has been made that all can be harmonized if Chicago is interpreted as meaning "strong," the Indians, being poorly supplied with words, usually selecting the most prominent attribute in giving names. All these things are in one way or another "strong," and it is evident that prodigious strength exists in Chicago.

As elsewhere throughout the Northwest, the French missionaries were here the earliest explorers, Father Marquette coming in 1673, and afterwards Hennepin, Joliet and La Salle, whose names are so numerously reproduced in the Northwestern States. The French built at the mouth of the river Fort Chicagou, for a trading-post, and held it until the English conquered Canada. When the earlier American settlers ventured to this frontier, the Indians on Lake Michigan were the Pottawatomies, and were hostile. The Government in 1804 built Fort Dearborn, near the mouth of the Chicago River, to control them. These Indians joined in the crusade of the Prophet and Tecumseh, and when the war with England began in 1812, attacked and captured the fort, massacring the garrison. The post was subsequently re-established, and the Indians were ultimately removed west of the Mississippi. Not long afterwards it was said the first purchase of the site of Chicago took place, wherein a large part of the land now occupied was sold for a pair of boots. When the town plot was originally surveyed, twelve families were there in

addition to the garrison of Fort Dearborn, and in 1831 it had one hundred people. In 1833 the town government was organized, and it had five hundred and fifty inhabitants and one hundred and seventy-five buildings. Five trustees then ruled Chicago, and collected $49 for the first year's taxes. Collis P. Huntington, the Pacific Railway manager, says that in 1835, being possessed of a good constitution and a pair of mules, but little else, he was out that way prospecting, and found at Chicago nothing but a swamp and a few destitute farmers, all anxious to move. One of these farmers came to him with the deed of his farm of two thousand acres, and offered to trade it for his pair of mules. Huntington adds: "I was not very favorably impressed with the settlement and declined his offer, and finally continued my travel west, and that farm is to-day the business centre of Chicago."

In 1837 Chicago got its first city charter, and it then had about forty-two hundred people. The rapid growth since has been unparalleled, especially when, after 1850, its commercial enterprise began attracting wide attention, the population then being about thirty thousand. In 1855, to get above the swamp and improve the drainage, the level of the entire city was raised seven feet, huge buildings being elevated bodily while business was progressing, an enterprise mainly accomplished by the ingenious devices which first gave prominence to the late George M. Pullman.

The population almost quadrupled and its trade increased tenfold in the decade 1850–60, and in 1870 the population was over three hundred thousand, and it had become a leading American city. Yet Chicago has had terrible setbacks in its wonderful career, the most awful being the fire in October, 1871, the greatest of modern times, which raged for three days, burned over a surface of nearly four square miles and until practically nothing remained in the district to devour, destroyed eighteen thousand buildings, two hundred lives, and property valued at $200,000,000, leaving a hundred thousand people homeless—a calamity that excited the sympathies of the world, which gave relief contributions aggregating $7,000,000. Yet while the embers were smoking, this enterprising people set to work to rebuild their city with a will and a progress which caused almost as much amazement as the original catastrophe. The recovery was complete; the city which had been of wood was rebuilt of brick and stone and iron and steel, and its progress since has developed an energy not before equalled. It has been beautified by grand parks and boulevards, and by the construction of palatial residences and business blocks, and of enormous office buildings, the tall "sky-scrapers" having been first invented and built in Chicago. In 1893 the World's Columbian Exhibition, to celebrate the discovery of America, was held at Chicago on a vast scale and with remarkable success. The city has

long been, also, a favorite meeting-place for the great political Conventions nominating candidates for President and Vice-President of the United States, its large hotel capacity and immense halls giving advantages for these enormous assemblages.

CHICAGO'S ADMIRABLE LOCATION.

The position of Chicago at the southwestern extremity of Lake Michigan, with prairies of the greatest fertility stretching hundreds of miles south and west, makes the city the primary food-gatherer and supply-distributor of the great Northwest, and this has been the chief cause of its growth. In September, 1833, the Pottawatomies agreed to sell their prairie homes to the United States and migrate to reservations farther West, and seven thousand of them assembled in grand council at Chicago, and sold the Government twenty millions of acres of these prairies around Lake Michigan, in Indiana, Illinois and Michigan, for $1,100,000. Thus was this fertile domain opened to settlement. In the Indian dialect, Michigan means the "great water," and it is the largest lake within the United States, being three hundred and twenty miles long and seventy broad, and having an average depth of one thousand feet, with the surface elevated five hundred and seventy-eight feet above the ocean level. On the Chicago side this extensive lake has but a narrow watershed, the Illinois River, draining the region to the west-

ward, being formed only sixty-five miles southwest of the lake by the junction of the Kankakee and Desplaines Rivers. This narrow and very low watershed, considered in connection with the enormous capacity of the Illinois River valley, which is at a much lower level and appears as if worn by a mighty current in former times, is regarded by geologists as an evidence of the probability that the Lake Michigan waters may in past ages have found their way to that outlet and flowed through the Illinois and Mississippi Rivers to the Gulf. The diminutive bayou of the Chicago River, with its two short and tortuous branches, made Chicago the leading lake port, and thus brought trade, so that early in the race it far outstripped all its Western rivals. Every railroad of prominence sought an outlet or a feeder at Chicago, and the title of a "trunk line" was adopted for a line of rails between Chicago and the seaboard. The surrounding prairie for miles is crossed in all directions by railways, and a large part of the city and suburbs is made up of huge stations, car-yards, elevators, storehouses and cattle-pens, almost overwhelming visitors with the prodigious scale of their elaborate perplexity. The maze of railways and streets on the level surface, all crossing at grade, as it has spread over miles of prairie and grown into such enormous proportions, presents a most serious problem, with which the city and the railways are now dealing on a comprehensive plan, by which it is

hoped that before long the grade-crossings will be eliminated.

Another problem, found even more serious as the city grew, was the drainage. In former years the sewage was discharged into the Chicago River and Lake Michigan. The river became a most malodorous stream in consequence, and as it had practically no descent, the current would scarcely flow, and the lake, from which the city water-supply was drawn, was more and more polluted. With the customary enterprise of these wonderful people, however, they decided to make the only change feasible, which was to take advantage of the descending watershed towards Desplaines River and change their sewerage system so that it would all discharge in that direction. The problem was solved by the construction of the most expensive drainage works in the world, and a complete change of the sewers, at a cost altogether approximating $40,000,000. St. Louis and the towns along the Desplaines fought the scheme, and there was protracted litigation, but the very existence of Chicago depended on the result. The great drainage canal was completed connecting the Chicago River South Branch with Desplaines River at Lockport, twenty-eight miles southwest, where it discharges the outflow from Lake Michigan, which then flows past Joliet, and ultimately into Illinois River. This huge canal, opened in January, 1900, reverses the flow of the Chicago River, which now draws in about three

hundred thousand cubic feet of water per minute from Lake Michigan and flushes the canal, which is also to be made available for shipping. Thus the Chicago River flows towards its source with a free current, and Lake Michigan has been purified. The canal has quite a descent to Lockport, and the water-power is to be availed of in generating electricity. The city water-supply is drawn from cribs out in the lake through four systems of tunnels, aggregating twenty-two miles, furnishing an ample service, and pumping-stations in various locations elevate the water in towers to secure sufficient head for the flow into the buildings. The chief of these towers, a solid stone structure alongside the lake, rises one hundred and sixty feet, the huge pumping-engines forcing a vast stream constantly over its top.

FEATURES OF CHICAGO.

Chicago is the world's greatest grain, lumber and cattle market. It attracts immigrants from everywhere, and all flourish in native luxuriance, although occasionally they are compelled to bow to the power of the law by the military arm when civil forces are exhausted. Everything seems to go on without much hindrance, and thus this wonderful city secures its rapid growth and completely cosmopolitan character. While proud of their amazing progress, the people seem generally so engrossed in pushing business enterprises and piling up fortunes that they have

little time to think of much else. Yet somebody has had opportunity to plan the adornment of the city by a magnificent series of parks and boulevards encircling it. The broad expanse of prairie was low, level and treeless originally, but abundant trees have since been planted, and art has made little lakes and miniature hills, beautiful flower-gardens and abundant shrubbery, thus producing pleasure-grounds of rare attractions. Michigan Avenue and Drexel and Grand Boulevards, leading to the southern system of parks and Lake Shore Drive on the north side of Chicago River, are the finest residential streets. The huge Auditorium fronting on Michigan Avenue was erected at a cost of $3,500,000, includes a hotel and theatre, and is surmounted with a tower rising two hundred and seventy feet, giving a fine view over the city and lake. Out in front is the Lake Park, with railways beyond near the shore, and a fine bronze equestrian statue of General John A. Logan, who died in 1886 and is buried in the crypt beneath the monument. Michigan Avenue begins at Chicago River alongside the site of old Fort Dearborn, now obliterated, and it stretches far south, a tree-lined boulevard adorned by magnificent residences.

Chicago River, with its entrance protected by a wide-spreading breakwater, is the harbor of the city, and, like its railways, carries the trade. Tunnels conduct various streets under it, and a multitude of bridges go over it, all of them opening to let vessels

pass. They are mostly swinging bridges, but some are ingenious constructions, which roll, and lift and fold, and in various curious ways open the channel for the shipping. Huge elevators line the river banks, with vessels alongside, into which streams of grain are poured, while multitudes of cars move in and out, under and around them, bringing the supply from the farm to the storage-bins. In the business section, as elsewhere, the streets are wide, thus accommodating the throngs who fill them, and there are fine city and national buildings, a new Post-office of large size and imposing architecture being in course of construction. The Chicago Public Library, completed in 1897, is a grand structure, costing $2,000,000, and having about three hundred thousand volumes. The University of Chicago, in the southern suburbs, is destined to become one of the leading institutions of learning in America. It began instruction in 1892, and now has some twenty-four hundred students, and endowments of $15,000,000, largely the gifts of John D. Rockefeller. The University grounds cover twenty-four acres, and when the plan is completed there will be over forty buildings. Its libraries contain three hundred and fifty thousand volumes. The great Yerkes Observatory, adjunct to this University, is at Lake Geneva, Wisconsin, seventy miles distant, and has the largest refracting telescope in the world, with forty-inch lens and a tube seventy feet long. On the northern side of the city is the

Newberry Library, with $3,000,000 endowment and two hundred thousand volumes, including admirable musical and medical collections, and the Crerar Library, with $2,000,000 endowment, principally for scientific works, is being established on the south side. Chicago's greatest industrial establishment is the Federal Steel Company, having enormous rolling-mills and foundries in various parts of the city, and also at Joliet on Desplaines River. Its South Chicago Rolling Mills occupy over three hundred acres. The manufacture of agricultural machinery is represented by two enormous establishments, the McCormick Harvesting Machine Company on the southwest side and the Deering Works in the northwestern district.

CHICAGO BUSINESS ENERGY.

As the elevators of Chicago represent its traffic in grain, and contain usually a large proportion of what is known as the "visible supply," so do the vast lumber-yards along Chicago River often store up an enormous product of the output from the "Great North Woods," covering much of Michigan, Wisconsin and Minnesota, and spreading across the Canadian border. The third great branch of traffic is represented by the Union Stock Yards in the southwestern suburbs. These yards in a year will handle eight millions of hogs, four millions of cattle, four millions of sheep and a hundred thousand horses, over two-thirds of the hogs and cattle being killed in the yards

and sent away in the form of meat, and the whole annual traffic being valued at $250,000,000. The yards cover three hundred acres, and with the packing-houses employ twenty-five thousand men, and they have twenty miles of water-troughs and twenty-five miles of feeding-troughs, and are served by two hundred and fifty miles of railway-tracks. The hog is a potential factor in American economy, being regarded as the most compact form in which the corn crop of the country can be transported to market. The corn on the farm is fed to the hog, and the animal is sent to Chicago as a package provided by nature for its economical utilization. The Union Stock Yards make a complete town, with its own banks, hotels, Board of Trade, Post-office, town-hall, newspaper and special Fire Department. The extensive enclosure is entered by a modest, gray sandstone turreted gateway, surmounted by a carved bull's head, emblematic of its uses. The Horse Market is a large pavilion, seating four thousand people. From this vast emporium, with its enormous packing-houses, are sent away the meat supplies that go all over the world, the product being carried out in long trains of canned goods and refrigerator cars, the most ingenious methods of "cold storage" being invented for and used in this widely extended industry.

The active traffic of the grain and provision trades of Chicago is conducted in the building of the Board of Trade, a tall and imposing structure at the head

of La Salle Street, which makes a fitting close to the view along that grand highway. It is one of the most elaborate architectural ornaments of the city, and its surmounting tower rises three hundred and twenty-two feet from the pavement. The fame of this grand speculative arena is world-wide, and the animated and at times most exciting business done within marks the nervous beating of the pulse of this metropolis of food products. The interior is a magnificent hall, lighted by high-reaching windows and surmounted by a central skylight elevated nearly a hundred feet above the floor. Impressive columns adorn the sides, and the elaborate frescoes above are in keeping with its artistic decoration. Upon the spacious floor, between nine and one o'clock, assemble the wheat and corn, and pork, lard, cattle and railway kings in a typical scene of concentrated and boiling energy feeding the furnace in which Chicago's high-pressure business enterprise glows and roars. These speculative gladiators have their respective "pits" or amphitheatres upon the floor, so that they gather in huge groups, around which hundreds run and jostle, the scene from the overlooking gallery, as the crowds sway and squirm, and with their calls and shouting make a deafening uproar, being a veritable Bedlam. Each "pit" deals in a specific article, while in another space are detachments of telegraph operators working with nimble fingers to send instant reports of the doings and prices to the anxious outer

world. High up on the side of the grand hall, in full view of all, are hung large dials, whose moving hands keep momentary record of the changes in prices made by the noisy and excited throngs in the "pits," thus giving notice of the ruling figures for the next month's "options" on wheat, corn and "short-ribs." There are tables for samples, and large blackboards bearing the figures of market quotations elsewhere. This Chicago Board of Trade has been the scene of some of the wildest speculative excitements in the country, as its shouting and almost frenzied groups of traders in the "pits" may make or break a "corner," and here in fitful fever concentrates the business energy of the great Metropolis of the Lakes.

PULLMAN AND THE SLEEPING-CAR.

Another Chicago specialty of wide fame is the railway sleeping-car, brought to its present high stage of development by one of the most prominent Chicagoans, the late George M. Pullman. The earliest American sleeping-car was devised by Theodore T. Woodruff, who constructed a small working model in 1854 at Watertown, New York, and subsequently building his car, first ran it on the New York Central Railroad in October, 1856, charging fifty cents for a berth. George M. Pullman was originally a cabinet-maker in New York State, and moved when a young man to Chicago. His first fame in that city, as already stated, came from the

ingenious methods he devised, when the grade of the town was elevated to secure better drainage, for raising the buildings by putting hundreds of jackscrews under them, trade continuing uninterrupted during the process. Pullman, subsequently to that time, travelled occasionally between Chicago and Buffalo, and one night got into Woodruff's car. He was stretched out upon the vibrating couch for some two hours, but could not sleep, and his eyes being widely open, and the sight wandering all about the car, he struck upon a new idea. When he left the car he had determined to develop from his brief experience a plan destined to expand into a complete home upon wheels for the traveller, either awake or sleeping. In 1859 he turned two ordinary railway coaches into sleeping-cars and placed them upon night trains between Chicago and St. Louis, charging fifty cents per berth, his first night's receipts being two dollars. He ran these experimental coaches about five years before he felt able to carry out his ideal plan, and he then occupied fully a year in constructing his model sleeping-car, the "Pioneer," at Chicago, at a cost of $18,000. But when completed the car was so heavy, wide and high that no railway could undertake running it, as it necessitated cutting off station platforms and elevating the tops of bridges before it could pass by. Thus he had a white elephant on his hands for a time. In April, 1865, President Lincoln's assassination shocked the country, and the funeral, with its

escort of mourning statesmen, was progressing from Washington to Chicago, on the way to the grave at Springfield. The nation watched its progress, and the railways transporting the *cortége* were doing their best. The manager of the road from Chicago to Springfield used the "Pioneer" in the funeral train, taking several days to prepare for it by sending out gangs of men to cut off the station platforms and alter the bridges. Pullman's dream was realized; his "coach of the future," with its escort of statesmen, carried the dead President to his grave and became noted throughout the land. A few weeks later, General Grant, fresh from the conquest of the Rebellion, had a triumphal progress from the camp to his home in Illinois. Five days were spent in clearing the railway between Detroit and Galena, where he lived, and the "Pioneer" carried Grant over that line.

These successes made Pullman's fortune, and the business of his company grew rapidly afterwards, it being now an enormous concern with $70,000,000 capital, controlling practically all the sleeping-cars of this country and many abroad. The main works are at the Chicago suburb of Pullman, ten miles south of the centre of the city, where there are about twelve thousand population, most of the people being connected with the works, which are an extensive general car-building establishment. Pullman was built as a model town, with every improvement calculated to add to the comfort and health of the work-

ing-people, being also provided with its own library, theatre, and a tasteful arcade, in which are various shops. It was at Pullman in 1894 that the great strike took place which ultimately involved a large portion of the railways of the country, causing much rioting and bloodshed, and finally requiring the intervention of the Federal troops to maintain the peace. After a protracted period of turmoil, the strike failed.

THE CORN CROP.

Chicago is the *entrepôt* for the great prairie region spreading from the Alleghenies westward beyond the Mississippi. Here grows the grain making the wealth of the land, and feeding the cattle, hogs and sheep that are poured so liberally into the Union Stock Yards of the Lake City. Upon the crops of this vast prairie land depends the prosperity of the country. Wall Street in New York and the Chicago Board of Trade are the market barometers of this prosperity, for the prairie farmer, as he may be rich and able to spend money, or poor so that he cannot even pay his debts, controls the financial outlook in America. The traveller, as he glides upon this universal prairie land, east, south and west of Chicago, viewing its limitless fertility seen far away in every direction over the monotonous level, as if looking across an ocean, cannot help recalling Wordsworth's pleasant lines:

> "The streams with softest sound are flowing,
> The grass you almost hear it growing,
> You hear it now, if e'er you can."

Then, as the crops ripen and are garnered, and the wealth of the prairie is turned into food for the world, there comes with the advancing autumn the ripening of the greatest crop of America, and the mainstay of the country, the Indian corn. It is wonderful to think that the first corn crop of the United States planted by white men at Jamestown, Virginia, on a field of forty acres in 1608, has grown to an annual yield approximating twenty-three hundred million bushels. This prolific crop is the banner product of the great prairie, and Whittier in his "Corn Song" has recorded its glories:

"Heap high the farmer's wintry hoard!
Heap high the golden corn!
No richer gift has autumn poured
From out the lavish horn!

"Let other lands, exulting, glean
The apple from the pine,
The orange from its glossy green,
The cluster from the vine;

"We better love the hardy gift
Our rugged vales bestow,
To cheer us when the storm shall drift
Our harvest fields with snow.

"Through vales of grass and meads of flowers,
Our plows their furrows made,
While on the hills, the sun and showers
Of changeful April played.

"We dropped the seed o'er hill and plain
Beneath the sun of May,
And frightened from our sprouting grain
The robber crows away.

"All through the long bright days of June
Its leaves grew green and fair,
And waved in hot midsummer's noon
Its soft and yellow hair.

"And now, with autumn's moonlit eves,
Its harvest time has come,
We pluck away the frosted leaves,
And bear the treasure home.

"There, richer than the fabled gift
Apollo showered of old,
Fair hands the broken grain shall sift,
And knead its meal of gold.

"Let vapid idlers loll in silk
Around their costly board;
Give us the bowl of samp and milk
By homespun beauty poured!

"Where'er the wide old kitchen hearth
Sends up its smoky curls,
Who will not thank the kindly earth,
And bless our farmer girls!

"Let earth withhold her goodly root,
Let mildew blight the rye,
Give to the worm the orchard's fruit,
The wheat field to the fly;

"But let the good old corn adorn
The hills our fathers trod;
Still let us for his golden corn
Send up our thanks to God!"

GLIMPSES OF THE GREAT NORTHWEST.

VII.

GLIMPSES OF THE GREAT NORTHWEST.

The Great Lakes—Sieur de La Salle—Lake St. Clair—Lake Huron—Detroit - Ann Arbor—Mackinac Island—Sault Sainte Marie—Lake Superior—Lake Nepigon—Thunder Bay—Port Arthur—Kakabika Falls—The Pictured Rocks—Marquette—Keweenaw—Iron and Copper—Houghton—Lake Gogebic—Superior City—Duluth—Messabi and Vermillion Ranges—Green Bay—Wisconsin—Milwaukee—Waukesha—Madison—Rock Island—Davenport—Moline Rapids—Dubuque—Iowa—Black Hawk—Minnesota—La Crosse—Lake Pepin—Falls of St. Anthony—St. Paul—Minneapolis—Fort Snelling—Flour and Lumber—Lake Minnetonka—Minnehaha Falls—Hiawatha and Minnehaha — Source of the Mississippi — Itasca Lake—Minnesota River—Red River of the North—Ancient Lake Agassiz—Sioux Falls—Fargo—Great Wheat Farms — Manitoba—Rat Portage — Keewatin—Winnipeg — Hudson Bay Company—Dakota—Bismarck—The Bad Lands—Yellowstone River—Montana—Big Horn River—Custer Massacre — Livingston — Cinnabar Mountain — Yellowstone National Park — Mammoth Hot Springs — Norris Geyser Basin—Firehole River—Lower, Middle and Upper Geyser Basins—Yellowstone Lake and Falls—The Grand Canyon—Two-Ocean Pond—Westward the Course of Empire Takes its Way.

THE GREAT LAKES.

René Robert Cavelier, the Sieur de La Salle, was the chief French pilgrim and adventurer in the seventeenth century who explored the Great Lakes and valley of the Mississippi, and secured for his country the vast empire of Louisiana, stretching

from Canada to the Gulf. His explorations were made in 1669 and again in 1678, and like all the discoverers of that early time he was hunting for the water way thought to lead to the South Sea and provide a route to China. The historian Parkman describes La Salle as one of the most remarkable explorers whose names live in history; the hero of a fixed idea and determined purpose; an untiring pilgrim pushing onward towards the goal he was never to attain; the pioneer who guided America to the possession of her richest heritage. Throughout the northwest his memory is preserved in the names of rivers, towns, and otherwise, and his maps and narratives gave the earliest geography of the Lakes and the vast and prolific region obtained from France in the Louisiana cession.

The Great Lakes on the northern border of the United States are the largest bodies of fresh water on the globe. They carry an enormous commerce, nearly a hundred thousand men being employed by the fleet of lake vessels, which approximates two millions tonnage. At the head of Lake Erie the waters of Detroit River pour in, draining the upper lakes, this stream, about twenty-five miles long, flowing from Lake St. Clair and broadening from a half-mile to four miles width at its mouth. Lake St. Clair is elevated five hundred and thirty feet, but is small, being about twenty-five miles in diameter, and shallow, only about twenty feet deep. The naviga-

tion of its shallows is intricate, and is aided by a long canal through the shoals at the upper end, where the St. Clair River discharges, a strait about forty miles long, flowing south from Lake Huron. This great lake is at five hundred and eighty feet elevation, and in places seventeen hundred feet deep, covering twenty-four thousand square miles, and containing many islands. At its northern end, Lakes Superior and Michigan join it by various straits and water ways beyond Mackinac Island. Westward of Lakes Ontario and Erie, and between them and Lake Huron, a long peninsula of the Dominion of Canada projects southward into the United States, terminating opposite Detroit. Similarly, to the westward of Lake Huron, and between it and Lake Michigan, the State of Michigan has its lower peninsula projecting upward to Canada. The Canadian projection, which is part of Ontario Province, is unfortunately located, being almost surrounded by these expansive lakes, having bleak, cold winds sweeping across them and seriously impeding its agriculture. The surface has little charm of scenery and the population is sparse. The trunk railways, however, find this an almost direct route from Western New York to Detroit and Chicago, and various roads traverse it, coming out on the Detroit River and the swift-flowing St. Clair River, which are crossed both by car-ferry and tunnel. At the outlet of Lake Huron, St. Clair River is less than a thousand feet wide between Point Ed-

ward and Fort Gratiot, and here and at Ports Sarnia and Huron the low and level shores are lined with docks, elevators and other accessories of commerce. This river brings vast amounts of sand down out of Lake Huron with its swift current, which are deposited on the St. Clair Flats beyond its mouth, keeping that lake shallow, and requiring the long ship canal to maintain navigation. Below Lake St. Clair, the wider Detroit River presents many fine bits of scenery, while the city of Detroit spreads for several miles along the northwestern bank, and has Windsor opposite, on the Canadian shore. Pretty islands dot the broadening stream below Detroit, and the varying width, with the bluffs on the Canadian side, and the meadows, fields and forests of Michigan, give lovely views.

DETROIT AND MACKINAC.

Detroit means "the strait," and the original Indian names for the river mean "the place of the turned channel." The early visitors who reached it by boat at night or in dark weather, and were inattentive to the involved currents, always remarked, as the Indians did before them, that owing to these extraordinary involutions of the waters, when the sun appeared again it always seemed to rise in the wrong place. The French under La Salle were the first Europeans who passed through the river, and in 1701 the Sieur de la Mothe Cadillac, who received grants from Louis XIV., came and founded Fort Pontchar-

train there, naming it after the French Minister of Marine, around which a settlement afterwards grew, to which the French sent colonists at intervals. The British got possession in 1760, and it successfully resisted the conspiracy and attacks of the Ojibway Indian chief Pontiac for over a year, the garrison narrowly escaping massacre. The United States, after the Revolution, sent out General St. Clair as Governor, and his name was given the lake to the northward. Detroit was a frontier post in the War of 1812, being alternately held by British and Americans. In 1824 it had about fifteen hundred people and became a city. It now has three hundred and fifty thousand population, and its commercial importance may be estimated from the fact that the whole enormous traffic of the Lakes passes in front of the city during the seven months that navigation is open, the procession of craft often reaching sixty thousand vessels in the season. Detroit also has extensive and varied manufactures. It has a gradually rising surface and broad and well-paved streets on a rectangular plan, with several avenues radiating from a centre, like the spokes of a wheel. The central square is the Campus Martius, an expansion, about a half-mile from the river, of Woodward Avenue, the chief street. Here is an elaborate City Hall, the principal public building, having in front a magnificent Soldiers' Monument. The suburbs are attractive, and there are various pleasant parks and rural cemeteries, the

leading Park of Belle Isle, covering seven hundred acres, being to the northeastward, with a good view over Lake St. Clair. Fort Wayne, the elaborate defensive work of Detroit, is on the river just below the city, and has a small garrison of regular troops. It is yet incomplete, and is designed to be the most extensive fortification on the northern frontier, commanding the important passage between Lakes Huron and Erie and the railway routes east and west.

The peninsula of Michigan was originally covered with the finest forests, so that lumbering has always been a leading industry of the people. The greater portion of its pine woods, however, has been cut off, so that that branch is declining; but its ample supply of hard woods has made the State a great manufacturer of furniture, which is shipped all over the country. Thirty-eight miles west of Detroit, on the Huron River, is the city of Ann Arbor, with a population of fifteen thousand. Here are the extensive buildings of the University of Michigan, the leading educational establishment of the northwest, attended by over three thousand students, of whom a large number are young women. It is richly endowed, and has departments of law and medicine, as well as of literature and science, a large library and an observatory. The State makes a liberal annual contribution for its support, raised by taxation, it being governed by eight regents elected by the people. At the northern extremity of the Michigan Peninsula is the

TITANOTHERIUM PINNACLE, WYOMING

Strait of Mackinac, through which Lake Michigan discharges into Lake Huron. This water way is about four miles wide. In the strait is Mackinac Island, about nine miles in circumference, which was early held by the French on account of its strategic importance, but, being taken by the English in 1760, was captured by Pontiac when he organized the Indian revolt against the British in 1763, and all its inhabitants massacred. It is now a military post and reservation of the United States. This rocky and wooded island contains much picturesque scenery, and is a favorite summer resort, its weird legends, fresh breezes, good fishing and clear waters being the attraction. It was an early post of the northwestern fur-traders, and here was founded one of the frontier trading-stations of the Astor Fur Company in the early nineteenth century by John Jacob Astor of New York, the building in the little village being still known as the Astor House.

LAKE SUPERIOR.

To the northward of Mackinac, Lake Superior discharges into Lake Huron through the Sault Sainte Marie Strait, the "Leap of St. Mary." This strait of St. Mary is a winding and most beautiful stream, sixty-two miles long, being a succession of expansions into lakes and contractions into rivers, dotted with pretty islands and having some villages on the banks. The chief attraction is the Sault, or "Leap,"

which is a rapid of about eighteen feet descent, the navigation being maintained through capacious modern systems of locks and ship canals provided by both the United States and Canada. To the westward is the great Lake Superior, the largest fresh-water lake on the globe, three hundred and sixty miles long and covering thirty-two thousand square miles, with a coast-line of about fifteen hundred miles. It is elevated about six hundred feet above the ocean level, and has a depth averaging one thousand feet. Nearly two hundred rivers and creeks flow into it, draining a region of a hundred thousand square miles. There are a few islands in the eastern and western portions, but all the centre of the lake is a vast unbroken sheet of water, and generally of a low temperature, the deeper waters being only 39° in summer. The early French missionaries, who were the first explorers, told their interesting story of Lake Superior in Paris in 1636, and in their published account speak of its coasts as resembling a bended bow, of which the north shore makes the arc of the bow, the south shore the chord, and the great Keweenaw Point, projecting far from the southern shore, represents the arrow. Superior has generally a rock-bound coast, displaying impressive beauties of scenery, particularly on the northern shore, where the beetling crags and cliffs are projected boldly into the lake along the water's edge. This northern coast is also much indented by deep

bays, bordered by precipitous cliffs, back of which rise the dark and dreary Laurentian Mountains. There are also rocky islands scattered near this portion of the coast, some presenting vast castellated walls of basalt and others peaks of granite, elevated a thousand to thirteen hundred feet above the lake. Nowhere upon the inland waters of North America is there grander scenery.

The most considerable affluent of Lake Superior upon its northern coast is the Nepigon River, coming grandly down cascades and rapids, bringing the waters of Lake Nepigon, an elliptical lake among the mountains to the northward covering about four thousand square miles, bounded by high cliffs, and elevated over eight hundred feet. It is studded with islands, has very deep waters, and receives various streams from the remote northern wilderness. Upon the northwestern shore of Lake Superior are gigantic cliffs, surrounding Thunder Bay, a deep indentation divided from Black Bay by the great projecting promontory of Thunder Cape, rising nearly fourteen hundred feet in grand columns of basalt, the summit containing the crater of an extinct volcano. Across from it is McKay Mountain, another basaltic Gibraltar, rising twelve hundred feet from the almost level plain bordering the bay. Pic Island is between them, guarding the entrance. The pretty Kaministiquia River flows through rich prairie lands down to Thunder Bay, and here is the chief Canadian town

on the lake, Port Arthur. Thirty miles up this river is the famous Kakabika Falls, where the rocks are cleft so that the stream tumbles into a chasm one hundred and thirty feet deep, and then boils along with rapid current for nearly a half-mile through the fissure, the sides towering perpendicularly, and in some places even overhanging their bases. Upon this river was for many years the well-known Hudson Bay Company's fur-trading station of Fort William, which now has grain elevators, and is a suburb of the spreading settlement of Port Arthur. This was the beginning of the great portage from Lake Superior over to the Hudson Bay waters at Fort Garry, on the Red River in Manitoba, now Winnipeg, the portage being the present route of the Canadian Pacific Railway.

SAULT SAINTE MARIE TO DULUTH.

The southern shore of Lake Superior is mostly composed of lowlands, covered with sand, glacial deposits and clays, which came from the lake during a former stage of much higher water, when it extended many miles south of the present boundary. These lands, while not well adapted to agriculture, contain rich deposits of copper, iron and other metals and valuable red sandstones. Around the rapids and canals at the outlet has gradually grown the town of Sault Sainte Marie, familiarly known as the "Soo," having ten thousand people, and developing import-

ant manufactures from the admirable water-power of the rapids, which is also utilized for electrical purposes. An international bridge brings a branch of the Canadian Pacific Railway over from Canada, on its way to Minneapolis and St. Paul, with connections southward to Chicago, and there is also the military post of Fort Brady. Stately processions of vessels constantly move through the canals, being locked up or down when the navigation season is open, and making this a very animated place, over fifteen thousand ships passing in the seven months when the canals are free from ice. The tonnage is the greatest using any system of canals in the world, far exceeding Suez, and the recent improvements enable vessels of twenty-one feet draft to go through the new locks. Both Governments have expended millions upon these important public works, which are chiefly employed for the transport of grain, flour, coal, iron-ores and copper. The favorite sports at the "Soo" are catching white fish and "shooting the rapids" in canoes guided by the Indians, who are very skillful.

About one hundred miles westward from the "Soo," on the southern lake shore, there rise cliffs of the red and other sandstones formed by the edges of nearly horizontal strata coming out at the border of the lake. These are the noted Pictured Rocks, rising three hundred feet, extending for a distance of about five miles, and worn by frost and storm into fantastic and romantic forms, displaying vivid hues—red, blue,

yellow, green, brown and gray—as they have been stained by the oozing waters carrying the pigments. At intervals, cascades fall over the rocks. One cliff, called the Sail Rock, is like a sloop in full sail, and there are various castles and chapels, and an elaborate Grand Portal. In the country around is laid much of the scene of *Hiawatha*, and at the little lake port of Munising, nearby, was the site of the wigwam of the old woman, Nokomis,

> "On the shores of Gitchee Gumee,
> Of the shining Big-Sea-Water."

To the westward is the region of iron-ores, and here is Marquette, named for the great Jesuit missionary Father Marquette, who was the first founder of mission settlements in this region, and died in 1675 near the mouth of Marquette River. This town of fifteen thousand people is on Iron Bay, and is the chief port of the Marquette, Menominee and Ishpeming mines. Farther to the westward the great Keweenaw Peninsula projects, the name meaning in the Indian dialect the "canoe portage." At its base, the Portage Lake almost separates it from the mainland, and a short portage to the westward formerly carried the canoes over the narrow isthmus. A canal now enables the lake shipping to pass through without making the long detour around the outer end of the peninsula. Upon this rocky peninsula are the great copper-mines of Michigan, including the

Quincy, Tamarack, Osceola, Franklin, Atlantic, and the Calumet and Hecla. The latter is the world's leading Copper Company, making over $4,000,000 estimated annual profit, employing five thousand men, and having the deepest shaft in existence, the Red Jacket, which has been sunk forty-nine hundred feet. Houghton, on the southern shore of Portage Lake, is the leading town of the copper district. To the southwestward and in the western part of the Upper Michigan Peninsula is Lake Gogebic, elevated thirteen hundred feet, in another prolific iron-ore district, the Gogebic range, which produces Bessemer ores, and has its shipping port across the Wisconsin boundary at Ashland, another busy town of fifteen thousand people at the head of Chequamegon Bay. Out in front are the Apostle Islands, a picturesque group, and to the westward the head of Lake Superior gradually narrows in the Fond du Lac, or end of the lake, where are situated its leading ports, Superior City in Wisconsin and Duluth in Minnesota.

Here in the seventeenth century came the early French, and in 1680 a trading-post was established by Daniel du Lhut, afterwards becoming a Hudson Bay Company Station. The mouth of St. Louis River and its bay were naturally recognized as important points for trade, and when the Northern Pacific Railway was projected Superior City got its start. The first railroad scheme failed, the panic of

1857 came, and the railway project was abandoned until after the Civil War; and then, when it was renewed, the terminus was located over on the other side of the river, the place being named Duluth, after the French trader. While there has been great rivalry between them, and Duluth has outstripped Superior, yet the latter has an extensive trade and thirty thousand people. Duluth, the "Zenith City of the Unsalted Seas," as it has been ambitiously called, was originally projected on Minnesota Point, a scythe-shaped natural breakwater running out seven miles into the lake, which protects the harbor, but the town was subsequently built farther in. There were about seventy white people in the neighborhood in 1860, and in 1869 its present site was a forest, while the railroad, which had many set-backs, had only brought about three thousand people there in 1885. The completion of other railway connections in various directions, the discovery of iron deposits, and the recognition of its advantageous position for traffic, subsequently gave Duluth rapid growth, so that it now has eighty thousand people, and is the greatest port on the lake. It is finely situated, the harbor being spacious and lined with docks and warehouses, and it has many substantial buildings. Back of the city a terrace rises some four hundred feet, an old shore line of Lake Superior when the water was at much higher level, and here is the Boulevard Drive, giving splendid views over

the town and lake. The vast extent of wheat lands to the westward and the prolific iron-ore district to the northward give Duluth an enormous trade. Its railways lead up to the Messabi and Vermillion ranges, now the greatest producers of Lake Superior iron-ores, the red hematite, most of the output being controlled by John D. Rockefeller and his associates. These mines yield the richest ores in the world, and have made some of the greatest fortunes in Duluth. Yet they were not discovered until 1891, and then the lands where they are generally went begging, because nobody would give the government price for them, $1.25 per acre. One forty-acre tract, then abandoned by the man who took it up because he did not think the pine wood on it was enough to warrant paying $50 for it, is now the Mountain Iron Mine, netting Mr. Rockefeller $375,000 annual profit, and his railroad bringing the ores out gets more than that sum for freights.

THE CITY OF MILWAUKEE.

The early French traders and explorers who came to the upper lakes naturally ascended their affluents, and in this way La Salle, Joliet, Hennepin and others crossed the portages beyond Lake Michigan to the tributaries of the Mississippi. They came to Green Bay on the west side of Lake Michigan, ascended the Fox River and crossed over to the Wisconsin River. Southward from the Upper Michigan Penin-

sula and westward of the lower peninsula of that State spreads the broad expanse of Lake Michigan, stretching from Mackinac and Green Bay down to Chicago. Its western shore is the State of Wisconsin, extending northward to Lake Superior. When the French explorers came along and floated down its chief river, an affluent of the Mississippi, the latter making the western boundary of the State, they found the Indian name of the stream to be a word which, according to the pronunciation, they spelled in their early narratives "Ouisconsing" and "Misconsin," and it finally came out in the present form of Wisconsin, thus naming the State. The original meaning was the "wild, rushing red water," from the hue given by the pine and tamarack forests. La Salle coasted in his canoe all along the western shore of Lake Michigan, from Green Bay down to Chicago, and crossed over to the Mississippi. The traders established various settlements on that shore which have grown into active cities, and the principal one, eighty-five miles north of Chicago, is Milwaukee, its name derived from the Indian Mannawahkie, meaning the "good land." A broad harbor, indented several miles from the lake, was the nucleus of the city, at the mouth of Milwaukee River, which receives two tributaries within the town, and thus adds to the facilities for dockage, while extensive breakwaters protect the harbor entrance from lake storms.

Milwaukee has three hundred and fifty thousand

people, and is the growth mainly of the latter half of the nineteenth century. It is finely located, with undulating surface, the streets lined with trees, and the splendid development of the residential section making it almost like an extensive park, the foliage and garden spaces are so extensive and attractive. Its population is largely German, and its breweries are famous, exporting their product all over the country. It has a grand Federal building, costing nearly $2,000,000, a Romanesque structure in granite, an elaborate Court-house of brown sandstone, a spacious City Hall, a magnificent Public Library and Museum, and many attractive churches and other edifices. Juneau Park, on a bluff overlooking the lake, commemorates the first settler, Solomon Juneau, and contains his statue. Here, in compliment to the large Scandinavian population of Wisconsin, is also a statue of Leif Ericsen, who is said to have been in command of the first detachment of Norsemen who landed in New England in the eleventh century. The Forest Home Cemetery at the southwestern verge of the city is one of the most beautiful in the country. Milwaukee is familiarly called the "Cream City" from the light-colored brick made in the neighborhood, which so largely enter into the construction of its buildings. It has extensive grain elevators and flour mills and large manufacturing industries. To the westward, in a park of four hundred acres, is the National Soldiers' Home, with accommodation for

twenty-four hundred. Its Sheridan Drive along the lake shore southward is gradually extending, the intention being to connect with the Sheridan Boulevard constructed northward from Chicago. The lion of the city, however, is the great Pabst Brewery, covering thirty-four acres and producing eight hundred thousand barrels of beer a year. Twenty miles inland to the westward is a favorite resort of the Milwaukeans, the noted Bethesda Spring of Waukesha, whose waters they find it beneficial to take copiously, large quantities being also exported throughout America and Europe for their efficacy in diabetes and Bright's disease.

The capital of Wisconsin is the city of Madison, seventy-five miles west of Milwaukee, built on the isthmus between Lakes Mendota and Monona, thus giving it an admirable position. It has about twenty thousand people, and the lake attractions make it a popular summer resort. The State Capitol is a handsome building in a spacious park, one of the wings being occupied by the Wisconsin Historical Society, with a library of two hundred thousand volumes, an art gallery and museum. The great structure of Madison is the University of Wisconsin, the buildings in a commanding position on University Hill overlooking the charming Lake Mendota. There are seventeen hundred students, and its Washburn Observatory, one of the best in America, has wide fame.

ASCENDING THE MISSISSIPPI.

Westward from Lake Michigan all the railroads are laid across the prairie land *en route* to various cities on the Mississippi River, several of them having St. Paul and Minneapolis for their objective points, although some go by quite roundabout ways. The great "Father of Waters" comes from Northern Minnesota, flows over the Falls of St. Anthony at Minneapolis, and is a river of much scenic attractiveness down to Dubuque and Rock Island, its width being usually about three thousand feet, excepting at the bends, which are wider, the picturesque bluffs enclosing the valley sometimes rising six hundred feet high. The railways leading to it traverse the monotonous level of prairie in Illinois and Wisconsin, excepting where a stream may make a gorge, and the face of the country is everywhere almost the same. The Moline Rapids in the Mississippi above Rock Island afford good water-power, and here the Government, owning the island, has established a large arsenal, which is the base for all the western army supplies. The admirable location has made cities on either bank, Rock Island in Illinois and Davenport in Iowa, both being commercial and manufacturing centres, and the latter city having the larger population. The Mississippi flows through a rather wide valley, with pleasant shores, having villas dotted on their slopes. The Moline Rapids,

which are said to have a water-power rivalling the aggregate of all the cataracts in New England, descend twenty-two feet in a distance of fourteen miles. Above them, the river flows between Illinois and Iowa, and various flourishing towns are passed, the largest being Dubuque, with fifty thousand people, the chief industrial city of Iowa, and a centre of the lead and zinc manufacture of the Galena district. This was the first settlement made by white men in Iowa, the city being named for Julien Dubuque, a French trader, who came in 1788 with a small party to work the lead-mines. Iowa is known as the "Hawkeye State," and its name is of Dakotan Indian derivation, meaning "drowsy," which, however, is hardly the proper basis for naming such a wide-awake Commonwealth. Opposite Dubuque is the northern boundary of Illinois, and above, the Mississippi separates Iowa from Wisconsin.

The Mississippi bordering bluffs now rise much higher and become more picturesque, Eagle Point, near Dubuque, being elevated three hundred feet. Prairie du Chien, just above the mouth of Wisconsin River, was one of the earliest French military posts. This region was the scene of the "Black Hawk War," that chief of the Sacs battling to get back certain lands which in 1832 had been ceded by the Sac and Fox Indians to the United States. He was finally defeated back of the western river shore, the boundary between Iowa and Minnesota being nearby.

Minnesota is the "North Star State," and its Indian name, taken from the river, flowing into the Mississippi above St. Paul, means the "cloudy water." The river scenery becomes more and more picturesque as the Mississippi is ascended, the bluffs rising to higher elevations. La Crosse is a great lumber manufacturing town, drawing its timber from both Minnesota and Wisconsin. Above, where islands dot the channel, is perhaps the most beautiful section of the river. Trempealeau Island, five hundred feet high, commands a magnificent view, and the Black River flows in through a splendid gorge. Winona is a prominent grain-shipping town, and at Wabasha the river expands into the beautiful Lake Pepin, thirty miles long and from three to five miles wide, with attractive shores and many popular resorts. Over the lake rise the bold round headland of Point No Point on one side and the Maiden Rock on the other. St. Croix River flows in above on the eastern bank, making an enlargement known as St. Croix Lake, and the upper Mississippi is now wholly within Minnesota, having here at the head of navigation the famous "Twin Cities" of St. Paul and Minneapolis.

THE FALLS OF ST. ANTHONY.

Father Hennepin was the first white man who penetrated the wilds of Minnesota, and in 1680 he discovered the great falls of the Mississippi River,

to which he gave the name of his patron saint, Anthony of Padua. The river just below the falls naturally attracted the attention of the French adventurers who came to trade with the Sioux, Chippewas and Dakotas, and the first white man who tarried and built a house here was a Canadian voyageur, who came in 1838. In 1841 a French priest established the Roman Catholic mission of St. Paul on the bank of the river, and thus the settlement was named. The admirable water-power of the falls, which, with their two miles of rapids, descend seventy-eight feet, afterwards attracted the attention of millers, lumbermen and other manufacturers, and this made the settlement of Minneapolis, ten miles westward and farther up the river, which began in 1849, the name meaning the "city of the waters." St. Paul grew with rapidity, being encouraged both by steamboat and afterwards by railway traffic; but Minneapolis, though started later, subsequently outstripped it. The two places, rivals yet friends, have extended towards each other, so as to almost form one large city, and they now have over four hundred thousand inhabitants. These "Twin Cities" are running a rapid race in prosperity, each independently of the other. St. Paul is rather more of a trading city, while Minneapolis is an emporium of sawmills and the greatest flour-mills in the world. Both are admirably located upon the bluffs rising above the Mississippi. St. Paul is situated upon a

series of ornamental semicircular terraces that are very attractive, though in some portions rather circumscribed. Minneapolis is built on a more extensive plan upon an esplanade overlooking the falls, and extending to an island in midstream, and also over upon the opposite northern side of the river. The Falls of St. Anthony is the most powerful waterfall in the United States wholly applied to manufacturing purposes. The entire current of the Mississippi comes down the rapids and over the falls, the latter having a descent of about fifty feet. It is protected by a wall built by the Government across the river, to prevent the wearing away of the sandstone formation, there having been serious inroads made, while the surface is covered with an apron of planks over which the water runs, with sluiceways alongside to shoot logs down. However much Father Hennepin may have admired the beauties of this great cataract, there is no longer anything picturesque about the Falls of St. Anthony. Logs jam the upper river, where the booms catch them for the sawmills, and subterranean channels conduct the water in various directions to the mills, and discharge their foaming streams below. There is no romance in the rumble of flour-rollers and the buzz of saws, but they mean a great deal of profitable business. The force exerted by the falls at low water is estimated at one hundred and thirty-five thousand horse-power.

St. Paul is the capital of Minnesota, and the State

is building a magnificent new Capitol, constructed of granite and marble, with a lofty central dome, at a cost exceeding $2,000,000. There is a fine City Hall and many imposing and substantial business edifices. Its especial residence street, Summit Avenue, is upon a high ridge, parallel with and some distance back from the Mississippi, the chief dwelling, a large brownstone mansion, being the home of the leading railroad prince of the Northwest, President James J. Hill of the Great Northern Railroad. Here is also the new and spacious Roman Catholic Seminary of St. Thomas Aquinas. The old military post of Fort Snelling is on the river above St. Paul, near the mouth of Minnesota River. In Minneapolis, the great building is the City Hall, completed in 1896, and having a tower rising three hundred and fifty feet, giving a superb view. The Guaranty Loan Company's Building is one of the finest office structures in America, with its roof arranged for a garden, where concerts are given. Minneapolis has a widely extended residential section, with hundreds of attractive mansions in ornamental grounds. Near the river bank is the University of Minnesota, having well-equipped buildings and attended by twenty-eight hundred students.

Minneapolis is the greatest flour manufacturing city in the world. Its mills, of which there are some twenty-five, are located along the river near the falls, and have a daily capacity of over sixty

thousand barrels, turning out about eighteen millions of barrels annually, which are sent all over the globe. The whole country west and northwest of Minneapolis, including the Red River Valley, the Dakotas and Manitoba, is practically a fertile wheat field, growing the finest grain that is produced in America, and this makes the prosperity of the city. The Pillsbury-Washburn Flour Mills Company are the leading millers. The great Pillsbury A mill, which turns out ten thousand seven hundred barrels a day, is the world's champion flour-mill. It is a marvel of the economical manufacture, the railway cars coming in laden with wheat, being quickly emptied, and then filled with loaded flour-barrels and sacks for shipment. Machinery does practically everything from the shovelling of wheat out of the car to the packing of the barrel or sack with the product. This huge mill stands in relation to the flour trade as Niagara does to waterfalls. The other great Minneapolis industry is the lumber trade. Minnesota is well timbered, a belt of fine forests, chiefly pine, stretching across it, known as the *Coteau des Bois*, or "Big Woods," an elevated plateau with a rolling surface, having thousands of lakes scattered through it, fed by springs, while their outlets go into streams feeding the Mississippi, down which the logs are floated to the booms above the falls. The extensive saw-mills will cut over four hundred and fifty millions of feet of lumber in a year. Thus the flour and

lumber have become the chief articles of export from Minneapolis.

There are several pleasant lakes in the neighborhood, which are popular resorts of the people of the "Twin Cities," the largest and most famous being Minnetonka, the Indian name meaning the "Big Water." It is a pretty lake, at nearly a thousand feet elevation, with low, winding and tree-clad shores, having little islets dotted over its surface, and myriads of indented bays and jutting peninsulas which extend its shore line to over a hundred miles, though the extreme length of the lake is barely seventeen miles. There are many attractive places on the shores and islands, and large steamers ply on its bosom. From this lake the discharge is through the Minnehaha River, and its Minnehaha Falls, the "Laughing Water," poetically praised by Longfellow in Hiawatha. The beautiful glen in which this graceful cataract is found has been made a park. The falls are about fifty feet high, and a critical observer has recorded that there is "only wanting a little more water to be one of the most picturesque cascades in the country." Below the Minnehaha Falls is another on a smaller scale, which the people thereabout have nicknamed the "Minnegiggle." Thus sings Longfellow of Minnehaha:

"Homeward now went Hiawatha;
Only once his pace he slackened,
Only once he paused or halted,
Paused to purchase heads of arrows

Of the ancient Arrow-maker,
In the land of the Dacotahs,
Where the Falls of Minnehaha
Flash and gleam among the oak-trees,
Laugh and leap into the valley.

"There the ancient Arrow-maker
Made his arrow-heads of sandstone,
Arrow-heads of chalcedony,
Arrow-heads of flint and jasper,
Smoothed and sharpened at the edges,
Hard and polished, keen and costly.

"With him dwelt his dark-eyed daughter,
Wayward as the Minnehaha,
With her moods of shade and sunshine,
Eyes that smiled and frowned alternate,
Feet as rapid as the river,
Tresses flowing like the water,
And as musical a laughter;
And he named her from the river,
From the water-fall he named her,
Minnehaha, Laughing Water.

"Was it then for heads of arrows,
Arrow-heads of chalcedony,
Arrow-heads of flint and jasper,
That my Hiawatha halted
In the land of the Dacotahs?

"Was it not to see the maiden,
See the face of Laughing Water,
Peeping from behind the curtain,
Hear the rustling of her garments,
From behind the waving curtain,
As one sees the Minnehaha
Gleaming, glancing through the branches,
As one hears the Laughing Water,
From behind its screen of branches?

"Who shall say what thoughts and visions
Fill the fiery brains of young men?

Who shall say what dreams of beauty
Filled the heart of Hiawatha?
All he told to old Nokomis,
When he reached the lodge at sunset,
Was the meeting with his father,
Was his fight with Mudjekeewis;
Not a word he said of arrows,
Not a word of Laughing Water."

THE SOURCE OF THE MISSISSIPPI.

It was in Minnesota, in 1862, that the terrible Indian uprising occurred in which the Sioux, exasperated by the encroachments of the whites, attacked the western frontier settlements in August, and in less than two days massacred eight hundred people. The troops were sent as soon as possible, attacked and defeated them in two battles, and thirty-eight of the Indians were executed on one scaffold at Mankato, on the Minnesota River southwest of Minneapolis, in December. The State of Minnesota is said to contain fully ten thousand lakes of all sizes, the largest being Red Lake in the northern wilderness, having an area of three hundred and forty square miles. The surface of the State rises into what is known as the Itascan plateau in the northern central part at generally about seventeen hundred and fifty feet elevation. From this plateau four rivers flow out in various directions—the one on the Western Minnesota boundary, the Red River of the North, draining the western slope towards Lake Winnipeg and finally to Hudson Bay; the Rainy

River, draining the northern slope also through Lake Winnipeg to Hudson Bay; the St. Louis River, flowing eastward to form the head of Lake Superior, and going thence to the Atlantic; and the Mississippi River, flowing southward to seek the Gulf of Mexico. Schoolcraft, the Indian ethnologist and explorer, named this Itascan plateau, and the little lake in its heart, where the Mississippi takes its rise, about two hundred miles north-northwest of Minneapolis, though the roundabout course of the river from its source to that city is a much longer distance, flowing nearly a thousand miles. There was a good deal of discussion as to whether this lake was really the head of the great river, as the lake received several small streams, but Schoolcraft settled the dispute, and named the lake Itasca, from a contraction of the Latin words *veritas caput*, the "true head." Its elevation is about sixteen hundred feet, being surrounded by pine-clad hills rising a hundred feet higher. Out of Itasca Lake the "Father of Waters" flows with a breadth of about twelve feet, and a depth ordinarily of less than two feet. It goes at first northerly, and then makes a grand curve through a long chain of lakes, describing a large semicircle to the eastward, and finally southwest, before it becomes settled as to direction, and takes its southeast course towards the Falls of St. Anthony, and onward in its grand progress to the Gulf.

THE ANCIENT LAKE AGASSIZ.

The Minnesota River, rising on the western boundary of the State, flows nearly five hundred miles in a deeply carved valley through the "Big Woods" to the Mississippi. Its source is in the Big Stone Lake, which, with Lake Traverse to the northward, forms part of the Dakota boundary. The Red River of the North, rising in Lake Traverse and gathering together the streams on the western slope of the Itascan plateau, flows northward between Minnesota and North Dakota, and into Manitoba, two hundred and fifty miles to Lake Winnipeg. This river has cut its channel in a nearly level plain, and it is curious that in times of freshet its waters connect, through Lakes Traverse and the Big Stone, with the Minnesota, so that steamboats of light draught can then occasionally pass from the Mississippi waters north to Lake Winnipeg. It was this rich and level plain of the valley of the Red River that in the glacial epoch formed the bed of a vast lake which scientists have named Lake Agassiz. Its area, as indicated by well-marked shore-lines and deltas, was a hundred miles wide and over four hundred miles long, stretching far into Manitoba, and the waters were two to four hundred feet deep. It was held up on the north by the retreating ice-sheet of the great glacier, the outlet being southward, where a channel fifty feet deep, fifty miles long and over a mile wide

can now be distinctly traced leading its outflow into the Minnesota River, whose valley its floods then greatly enlarged on the way to the Mississippi. The plain of this lake bed is almost level, descending towards the northward about a foot to the mile, and here the ancient lake deposited the thick, rich, black soils which have made the greatest wheat-growing region of North America.

The first settlement of Dakota was on the Big Sioux River at Sioux Falls, where flour-mills and other manufacturing establishments have gathered around a fine water-power, and there are nearly fifty thousand people in the two towns of Sioux Falls in South Dakota and Sioux City in Iowa. The whole region to the northward and far over the Canadian boundary is a land of wheat-fields, with grain elevators dotting the flat prairie at the railway stations, for all the roads have lines to tap the lucrative trade of this prolific region. The Northern Pacific Railway crosses Red River at Fargo, which, with the town of Moorhead, both being wheat and flour centres, has a population of fifteen thousand. To the westward are the vast "Bonanza" wheat farms of Dakota, of which the best known is the Dalrymple farm, covering forty-five thousand acres. Steam-ploughs make continuous furrows for many miles in the cultivation, and in the spring the seeding is done. The whole country is covered with a vast expanse of waving, yellow grain in the summer, and the har-

vest comes in August. To the westward flows James River through a similar district, and the country beyond rises into the higher plateau stretching to the Missouri. This fertile wheat-growing region extends far northward over the Canadian border forming the Province of Manitoba, the name coming from Lake Manitoba, which in the Cree Indian dialect means the "home of Manitou, the Great Spirit." Its enormous wheat product makes the business of the flouring-mills of Minneapolis, Duluth and many other cities, and furnishes a vast stream of grain to go through the Soo Canal down the lakes and St. Lawrence, much being exported to Europe.

The Canadian Pacific Railway, which provides the traffic outlet for Manitoba, comes from the northern shore of Lake Superior at Port Arthur northwestward up the valley of the Kaministiquia River, and its tributary the Wabigoon, the Indian "Stream of the Lilies." This was the ancient portage, and by this trail and Winnipeg River, the canoe route of the Hudson Bay Company voyageurs, Lord Wolseley led the British army in 1870 to Fort Garry (Winnipeg) that suppressed Louis Riel's French-Indian half-breed rebellion, which had possession of the post. The railway route is through an extensive forest, and leads near the northern shore of the Lake of the Woods, crossing its outlet stream at Rat Portage, so named from the numerous colonies of muskrats, a town of sawmills standing at the rocky rim of the

lake, where its waters break through and down rapids of twenty feet fall to seek Winnipeg River, the Ounipigon or "muddy water" of the Crees. Here, and at Keewatin beyond, are grand water-powers, the latter having mammoth mills that grind the Manitoba wheat and send the flour to England. Then, emerging from the forests, the railway crosses the rich black soils of the Red River Valley, and beyond that river enters Winnipeg, the "Prairie City" and commercial metropolis of the Canadian Northwest. For nearly eight hundred miles this alluvial region spreads west and northwest of Winnipeg, with varying degrees of fertility, to the Rocky Mountains. Here, at the junction of the Assiniboine River, coming from the remote northwest, with Red River, has grown a Canadian Chicago of fifty thousand people, developed almost as if by magic, from the little settlement of two hundred and forty souls, whom Wolseley found in 1870, around what was then regarded as the distant Hudson Bay Company frontier post of Fort Garry. Its original name when first established was Fort Gibraltar. The two rivers wander crookedly over the flat land, and between them the city covers an extensive surface. A half-dozen railways radiate in various directions, and there are spacious car-yards and stations. Winnipeg has an energetic population, largely Scotch and Americans, but with picturesque touches given by the copper-colored Indians and French half-breeds, who wander about in

their native costumes, though most of these have gone away from Red River Valley to the far Northwest. The city has good streets, many fine buildings and attractive stores. The Manitoba Government Buildings adjoin the Assiniboine River, and the military barracks of Fort Osborne are alongside. Near the junction of the rivers is the little stone gateway left standing, which is almost all that remains of the original trading-post buildings of Fort Garry, representing the venerable Hudson Bay Company, chartered by King Charles II. in 1670, that controlled the whole vast empire of the Canadian Northwest. This Company was a grant by the king originally to Prince Rupert and a few associates of a monopoly of the fur trade over a vast territory in North America, extending from Lake Superior to Hudson Bay and the Pacific Ocean. In this way that portion of British America came to be popularly known in England as "Prince Rupert's Land." The great Company existed for nearly two hundred years, had one hundred and fifty-two trading-posts, and employed three thousand traders, agents and voyageurs, and many thousands of Indians. In the bartering with the red men, the unit of account was the beaver skin, which was the equivalent of two martens or twenty muskrats, while the pelt of a silver fox was five times as valuable as a beaver. In 1869, when the Dominion of Canada was formed, England bought the sovereignty of the Company for $1,500,000 and

transferred its territory to Canada. The Company still retains its posts and stores, however, and conducts throughout the Northwest a mercantile business. Far to the westward of Winnipeg spread the fertile prairies of Manitoba and Assiniboia Provinces, until they gradually blend into the rounded and grass-covered foothills making the grazing ranges of Alberta that finally rise into the snow-capped peaks of the Rockies.

DAKOTA AND MONTANA.

Three railways are constructed westward from Red River to the Rockies and Pacific Ocean,—the Northern Pacific and Great Northern in the United States and the Canadian Pacific beyond the international boundary. The former cross the plateau to the Upper Missouri River, and there the Northern Pacific route reaches Bismarck, the capital of North Dakota, having a fine Capitol set on a hill, the corner-stone of which was laid in 1883, with the noted Sioux chief Sitting Bull assisting. This region not so long ago knew only soldiers and Indians; but there has since been a great influx of white settlers, enforcing the idea of which Whittier has significantly written:

> "Behind the squaw's birch-bark canoe,
> The steamer smokes and raves;
> And city lots are staked for sale
> Above old Indian graves."

The frontier army post of Fort Lincoln on the

bluff alongside the river testifies to the time not yet remote when the Sioux and Crow Indians of the Dakotas needed a good deal of military control. The deer, buffalo and antelope then roamed these boundless prairies, but they have all disappeared. Beyond the Missouri River is the region of the Dakota "Bad Lands." The surface rises into sharp conical elevations known as "buttes," and soon this curious district of pyramidal hills known as Pyramid Park is entered, fire and water having had a remarkable effect upon them. Their red sides are furrowed by the rains, and smoke issues from some of the crevices. The lignite and coal deposits underlying this country have produced subterranean fires that burnt the clays above until they became brittle and red. There are ashes and scoriæ in patches, and cinders looking much like the outcast of an iron furnace. The buttes are at times isolated and sometimes in rows, many being of large size. Their sides are often terraced regularly, and frequently into fantastic shapes, occasionally appearing as the sloping ramparts of a fort. There are frequent pot-like holes among them, filled with reddish, brackish water, and sometimes excavated in the ground with regularly square-cut edges. When the railway route cuts into a butte, its interior is disclosed as a pile of red-burnt clay fragments mixed with ashes and sand. Little prairie dogs dodge in and out of their holes, but there is not much else of life. The boundary is crossed

into Montana, and the "Bad Lands" gradually give place to a grazing section. Here stands up the great Sentinel Butte, with its reddish-yellow sides, near the Montana border, and the railway route then descends from the higher region to the valley of the Yellowstone.

The Yellowstone River, one of the headwaters of the Missouri, rises in the National Park, and its fertile valley is among the leading pasturages of Montana. Cattle and sheep abound, and the cowboys are universal, galloping about on energetic little bronchos, with lariats hanging from the saddle. The Big Horn River flows in, and an extensive region to the southward is the Crow Indian reservation, about three thousand living there. It was here, near Fort Custer, at a point forty-five miles south of the railroad, that the terrible massacre took place in June, 1876, by which General Custer and his command of over two hundred and fifty men were annihilated by the Sioux. There is now a national cemetery at the place. We gradually enter the mountain ranges which are the outposts of the Rockies, and passing between the Yellowstone range and the Belt Mountains, reach Livingston, a town of several thousand people, and a great centre for hunting and fishing, at the entrance to the Yellowstone National Park. From here a branch railway turns southward, ascending the valley of the Yellowstone, going through its first canyon, known as the "Gate of the Mountain," an

impressive rocky gorge, and ascending a steep grade, so that the floor of the valley rises within the Park to an elevation of over six thousand feet above the sea. A second canyon is passed, and on its western side is a huge peak whose upheaved red rocks have named it the Cinnabar Mountain. These red rocks are in strata streaked down its sides with intervening granite and limestone. One of these, the Devil's Slide, is conspicuous, its quartzite walls rising high above the lower strata and making a veritable slide of great proportions down the mountain. The railroad ends at Cinnabar, and stages cover the remaining distance up the Yellowstone to its confluence with Gardiner River at the Park entrance, and thence to the Mammoth Hot Springs within the Park, the tourist headquarters.

THE AMERICAN WONDERLAND.

The Yellowstone National Park has been set apart by Congress as a public reservation and pleasure-ground, and covers a surface of about fifty-five hundred square miles within the Rocky Mountains. Most of the Park is in the northwestern corner of Wyoming, but there are also small portions in Montana to the north and Idaho to the west. It is a tract more remarkable for natural curiosities than an equal area in any other part of the world, and within it are the sources of some of the greatest rivers of North America. The Yellowstone, Gardiner and Madison

Rivers, which are the headwaters of the Missouri, flow out of the northern and western sides, while on the southern side originates the Snake River, one of the sources of the Columbia River of Oregon, and also the Green River, a branch of the Colorado, flowing into the Gulf of California. The central portion of the Park is a broad volcanic plateau, elevated, on an average, eight thousand feet above the sea, and surrounded by mountain ridges and peaks, rising to nearly twelve thousand feet, and covered with snow. The air is pure and bracing, little rain falls, and the whole district gives evidence of remarkable volcanic activity at a comparatively late geological epoch. It contains the most elevated lake in the world, Yellowstone Lake. The Yellowstone River flows into this lake, and then northward through a magnificent canyon out of the Park. Its most remarkable tributary within the Park is Tower Creek, flowing through a narrow and gloomy pass for two miles, called the Devil's Den, and just before reaching the Yellowstone having a fall of one hundred and fifty-six feet, which is surrounded by columns of breccia resembling towers. There is frost in the Park every month in the year, owing to the peculiar atmospheric conditions. The traces of recent volcanic activity are seen in the geysers, craters and terrace constructions, boiling springs, deep canyons, petrified trees, obsidian cliffs, sulphur deposits and similar formations. These geysers and springs surpass in number and magnitude

those of the rest of the world. There are some five thousand hot springs, depositing mainly lime and silica, and over a hundred large geysers, many of them throwing water columns to heights of from fifty to two hundred and fifty feet. The most elaborate colors and ornamentation are formed by the deposits of the springs and geysers, these curiosities being mainly in and near the valleys of the Madison and Gardiner Rivers. An attempt has been made under Government auspices to have in the Park a huge game preserve, and within its recesses large numbers of wild animals are sheltered, including deer, elk, bears, big-horn sheep, and the last herd of buffalo in the country. Troops of cavalry and other Government forces patrol and govern the Park.

THE MAMMOTH HOT SPRINGS.

This extraordinary region was first made known in a way in 1807. A hunter named Coulter visited it, and getting safely back to civilization, he told such wonderful stories of the hot springs and geysers that the unbelieving borderers, in derision, called it "Coulter's Hell." Others visited it subsequently, but their remarkable tales were generally regarded as romances. The first thorough exploration was made by Prof. Hayden's scientific party for the Government in 1871, and his report led Congress to reserve it as a public Park. The visitor generally first enters the Park at the Mammoth Hot Springs, which

are near the northern verge of the broad central plateau. Here are the wonderful terraces built up by the earlier calcareous deposits of these Springs, covering an area of several square miles, and in the present active operations about two hundred acres, with a dozen or more terraces, and some seventy flowing springs, the temperature of the water rising to 165°. The lower terrace extends to the edge of the gorge of Gardiner River, with high mountain peaks beyond. The hotel is built on one of the terraces, with yawning caves and the craters of extinct geysers at several places in front. The higher terraces rise in white, streaked with brown and other tints, as the overflowing, trickling waters may have colored them. The best idea that can be got of this place is by conjuring up the popular impression of the infernal regions with an ample stock of heat and brimstone. For a long distance, rising from the top of the gorge of Gardiner River westward in successive terraces to a height of a thousand feet above the stream, the entire surface is underlaid with sulphur, subterranean fires, boiling water and steam, which make their way out in many places. The earth has been cracked by the heat into fissures, within which the waters can be heard boiling and running down below, and everything on the surface which can be, is burnt up. Almost every crevice exudes steam and hot water; sulphur hangs in stalactites from the caves; and in some places the odors are nearly over-

powering. It is no wonder the Indians avoided this forbidding region, and that the tales told by the early explorers were disbelieved. Yet it is as attractive as it is startling. The hot springs form shallow pools, where the waters run daintily over their rim-like edges, trickling down upon terrace after terrace, forming the most beautiful shapes of columns, towers and coral decorations from the lime deposits, and painting them with delicious coloring in red, brown, green, yellow, blue and pink. So long as the waters run, this decoration continues, but when the flow ceases, the atmosphere turns everything white, and the more delicate formations crumble. The whole of this massive structure has been built up by ages of the steady though minute deposits of the waters, the rate being estimated at about one-sixteenth of an inch in four days. The rocks upon which these calcareous deposits are made belong to the middle and lower Cretaceous and Jurassic formations, with probably carboniferous limestones beneath that put the deposits in the waters. A dozen different terraces can be traced successively upward from the river bank to the highest part of the formation. Two cones of extinct geysers rise from the deposits, near the hotel,—the Liberty Cap, forty-five feet high, and the Giant's Thumb, somewhat smaller,—both having been built up by the deposits from orifices still seen in their tops, whence the waters have ceased flowing. All these springs, as deposits are made, shift their

locality, so that the scene gradually changes as the ages pass.

In climbing about this remarkable formation, some of the most beautiful bits of construction and coloring nature has ever produced are disclosed. The Orange Geyser has its sides streaked with orange, yellow and red from the little wavelets slowly trickling out of the steaming spring at the top, which goes off at quick intervals like the exhaust of a steam-engine. At the Stalactite Cave the flowing waters add green to the other colors, and also scale the rocks in places like the back of a fish, while below hang stalactites with water dropping from them. The roof of the cave is full of beautiful formations. The water is very hot when it starts from the top, but becomes quite cold when it has finished its journey down. One of the finest formations is Cleopatra's Bath, with Cupid's Cave beneath, the way to them being through Antony's Gate, all built up of the deposits. Here rich coloring is painted on the rocks, with hot water and steam amply supplied to the bath, which has 154° temperature at the outer verge. All the springs form flat basins with turned-up edges, over which the waters flow, and trickling down the front of the terrace, paint it. When the flow ceases, and the surface has been made snowy white by the atmosphere, it becomes a spongy and beautiful coral, crumbling when touched, and into which the foot sinks when walked upon. The aggregation of the

currents run in streams over terrace after terrace, spread out to the width of hundreds of feet, painting them all, and then seeking the Gardiner River, flowing through a deep gorge in front of the formation. Everything subjected to the overflow of these currents gets coated by the deposits, so that visitors have many small articles coated to carry away as curiosities.

Among the many beautiful formations made by these Hot Springs, the most elaborate and ornamental are the Pulpit Terraces. These are a succession of magnificent terraces, fifty feet high, with beautifully colored columnar supports. There is a large pulpit, and in front, on a lower level, the font, with the water running over its edges. The pulpit, having been formed by a spring that has ceased action, is white, while the font is streaked in red and brown. Finely carved vases filled with water stand below, and alongside the pulpit there is an inclined surface, whitened and spread in wrinkles like the drifted snow, which requires very little imagination to picture as a magnificent curtain. Beyond is a blackened border like a second curtain, the coloring being made by a spring impregnated with arsenic. In front of this gorgeous display the surface is hot and cracked into fissures, with bubbling streams of steaming water running through it, and great pools fuming into new basins with turned-up edges, over which the hot water runs. Upon one of these pools

seems to be a deposit of transparent gelatine, looking like the albumen of an egg, streaked into fantastic shapes by elongated bubbles. Everywhere are surfaces, over which the water runs, that are covered with regular formations like fish scales. It is impossible to adequately describe this extraordinary place, combining the supposed peculiarities and terrors of the infernal regions with the most beautiful forms and colors in decoration. The great hill made by these Hot Springs was, from its prevailing color, named the White Mountain by Hayden. The springs extend all the way down to the river bank, and there are some even in the river bed. It is a common experiment of the angler to hook a small fish in the cold water of the river, and then, without changing position, to swing him on the hook over into the basin of one of these hot springs to cook him. The formation of the terraces is wedge-shaped, and runs up into a gulch between the higher mountains, which have pines scattered over them, and also grow some grass in sheltered nooks. It is said that the volume of the springs is gradually diminishing.

THE NORRIS GEYSER BASIN.

The route southward into the Park crosses mountain ridges and over stretches of lava and ashes and other volcanic formations, through woods and past gorges, and reaches the Obsidian Creek, which flows near the Obsidian Cliff. This remarkable structure

is a mountain of black glass of volcanic formation, rising six hundred feet, with the road hewn along its edge. It looks as if a series of blasting explosions had blown its face into pieces, smashing the glass into great heaps of *débris* that have fallen down in front. The formation is columnar, rising from a morass adjoining Beaver Lake, which is a mile long. The divide is thus crossed between the Gardiner and Gibbon Rivers, the latter flowing into the Madison, and here, twenty-five miles from the Mammoth Hot Springs, is the Norris Geyser Basin. In approaching, seen over the low trees, the place looks much like the manufacturing quarter of a city, steam jets rising out of many orifices, and a hissing being heard as of sundry engine exhausts. The basin covers about one hundred and fifty acres, and is depressed below the general level. The whole surface is lime, silica, sulphur and sand, fused together and baked hard by the great heat, cracked into fissures, and, as it is walked over, giving out hollow sounds, showing that beneath are subterranean caves and passages in which boil huge cauldrons. There is a background formed by the bleak-looking mountains of the Quadrate range, having snow upon their tops and sides. The steam blows off with the noise of a hundred exhaust pipes, and little geysers boil everywhere, occasionally spurting up like the bursting of a boiler. In one place on the hillside the escaping steam from the "Steamboat" keeps up a loud and steady roar; in

another is the deeper tone of the "Black Growler." As a general thing, the higher vents on the hill give off steam only, while the lower ones are geysers. The trees are coated with the deposits, the surface is hot, and all underneath seems an immense mass of boiling water, impregnated with sulphur, giving off powerful odors, while brimstone and lime-dust encrust everything, and a large amount of valuable steam-power goes to waste.

This is the smallest of the basins, having few large geysers. Most of them are little ones, spurting every few minutes, and with some view to economy, whereby the water, after being blown out of the crater to a brief height, runs back into the orifice again, ready to be ejected by the next explosion. A mud geyser here throws up large quantities of dirty white paint in several spouting jets, the eruption continuing ten minutes, when nearly all the water runs back again, leaving the crater entirely bare, and its rounded, water-worn rocks exposed. The "Emerald Pool" is the wide crater of an old geyser, filled with hot water of a beautiful green color, constantly boiling, but never getting as far as an eruption. Probably the best geyser on exhibition in this basin is the "Minute Man," which, at intervals of about one minute, spouts for ten or twelve seconds, the column rising thirty feet, and the rest of the time it blows off steam. The "Vixen" is a coquette which is delightfully irregular, never going

off when watched, but when the back is turned suddenly sending out a column sixty feet high. The great geyser here is the "Monarch," standing in a hill from which it has blown out the entire side, and once a day discharging an enormous amount of water over one hundred feet high, and continuing nearly a half-hour. Its column comes from two huge orifices, the surplus water running down quite a large brook. When quiet, this geyser industriously boils like a big tea-kettle. There are plenty of "paint pots" and sulphur springs, and the visitors coax up lazy geysers by throwing stones into them,—a method usually making the small ones go to work, as if angry at the treatment.

THE LOWER AND MIDDLE BASINS.

Through the long deep canyon of the Gibbon River, and up over the mountain top, giving a distant view of the Gibbon Falls, a cataract of eighty feet far down in the valley, the road crosses another divide to a stream in the worst portion of this Satanic domain, which has not been inappropriately named the Firehole River. This unites with the Gibbon to form the Madison River, one of the sources of the Missouri. Miles ahead, the steam from the Firehole Geyser Basins can be seen rising in clouds among the distant hills. Beyond, the view is closed by the Teton Mountains, far to the southwest, rising fourteen thousand feet, the Continental

divide and backbone of North America, the highest Rocky Mountain range, on the other side of which is the Snake River, whose waters go off to the Pacific. The Firehole River is a stream of ample current, with beautifully transparent blue water bubbling over a bed of discolored stones and lava. Its waters are all the outflow of geysers and hot springs, impregnated with everything this forbidding region produces; pretty to look at, but bitter as the waters of Marah. Along this river, geysers are liberally distributed at intervals for ten miles, being, for convenience of description, divided into the Lower, Middle and Upper Geyser Basins. The Lower Basin, the first reached, has myriads of steam jets rising from a surface of some three square miles of desolate geyserite deposits. There are about seven hundred springs and geysers here, most of them small. The Fountain Geyser throws a broad low stream of many interlacing jets every two to three hours, lasting about fifteen minutes. The "Thud" Geyser has a crater one hundred and fifty feet in diameter, having a smaller rim inside, within which the geyser operates, throwing a column of sixty feet with a heavy and regular "thud" underground, though it has no fixed period, and is irregular in action. This basin has a generous supply of mud geysers, known as the "paint pots," which eject brilliantly colored muds with the consistency and look of paint, the prevailing hues being red, white, yellow and pink.

About three miles to the southwest, farther up the Firehole River, is the Middle Geyser Basin. It is a locality covering some fifty acres, close to the river, and contains the greatest geyser in the world. The name of Hell's Half Acre was given this place in the early explorations, and still sticks. The surface is composed mainly of hot ashes, with streams of boiling water running over it. The whole basin is filled with hot springs, and surrounded by timbered hills, at the foot of which is the Prismatic Lake, its beautiful green and blue waters shading off into a deposit of bright red paint running down to the river. The great Excelsior Geyser is a fountain of enormous power but uncertain periods, which when at work throws out such immense amounts of water as to double the flow of the river. Its crater is a hundred yards wide, with water violently boiling in the centre all the time and a steady outflow. The sides of the crater are beautifully colored by the deposits, which are largely of sulphur. It is a geyser of modern origin, having developed from a hot spring within the memory of Park denizens. It throws a column over two hundred feet high, and while quiet at times for years, occasionally bursts forth, though having no fixed period. In close connection to the westward is the seething cauldron which is the immediate Hell's Half Acre, that being about its area—a beautiful but terrible lake, steam constantly rising from the surface, which boils furiously and sends copious streams

over the edges. This is an uncanny spot, with treacherous footing around, and about the hottest place in the Park.

THE UPPER FIREHOLE BASIN.

For five miles along the desolate shores of Firehole River the course is now taken in a region of mostly extinct geysers, yet with active hot springs and steam jets, and having ashes and cinders covering wide spaces. Ahead is the largest collection of geysers in the world, with clouds of steam overhanging—the Upper Firehole Basin. Hot water runs over the earth, and the "paint pots" color the surface in variegated hues. Here are some forty of the greatest geysers in existence, in a region covering two or three square miles, all of them located near the river, and their outflow making its initial current. The basin is at seventy-three hundred feet elevation above the sea. When the author visited this extraordinary place the guide, halting at the verge, said: "Now I have brought you to the front door of hell." He was asked if there were any Indians about there, and solemnly replied: "No Indian ever comes into this country unless he is blind; only the white man is fool enough to come;" then after a moment's pause he continued, "And I get paid for it, I do." The great stand-by of this Upper Basin, and the geyser that is first visited, is "Old Faithful," near its southern or upper end. This most reliable geyser, which

always goes off at the time appointed, is a flat-topped and gently rising cone about two hundred feet in diameter, and elevated towards the centre about twenty feet. The tube is an orifice of eight feet by two feet wide in the centre of this cone, with water-worn and rounded rocks enclosing it. Steam escapes all the time, and the hard, scaly and laminated surface around it seems hollow as you walk across, while beneath there are grumblings and dull explosions, giving warning of the approaching outburst. Several mounds of extinct geysers are near, with steam issuing from one of them, but all have long since gone out of active business. Soon "Old Faithful" gives the premonitory symptoms of an eruption. The steam jet increases, and also the internal rumblings. Then a little spurt of hot water comes, hastily receding with a growl, followed by more steam, and after an interval more growling, finally developing into repeated little spurts of hot water, occupying several minutes. Then the geyser suddenly explodes, throwing quick jets higher and higher into the air, until the column rises in a grand fountain to the height of about one hundred and fifty feet, the stream inclined to the northward, and falling over in great splashes upon that side of the cone, dense clouds of steam and spray being carried by the wind, upon which the sun paints a rainbow. After some four minutes the grand jet dies gradually down to a height of about thirty feet, continuing at that eleva-

tion for a brief time, with quickly repeated impulses. When six minutes have elapsed, with an expiring leap the water mounts to a height of fifty feet, there is a final outburst of steam, and all is over. A deluge of hot water rushes down to the Firehole River; and thus "Old Faithful" keeps it up regularly every hour. The eruption being ended, you can look down into the abyss whence it came. Through the hot steam, rushing out with a strong draught, there is a view far down into the rocky recesses of the geyser. The water left by the eruption stands about in transparent shallow pools, and is tinted a pale blue. "Old Faithful's" mound is built up of layers of geyserite—hard, brittle, porous, full of crevices, and having all about little basins with turned-up rims that retain the water. This geyser is the favorite in the region, not only because of its regular performance, but possibly because its odors are somewhat less sulphurous than those emanating elsewhere.

The geysers of the Upper Basin contribute practically the whole current of the Firehole River, their outflow sending into the stream ten million gallons daily. Across the river to the northward, close to the bank, is the Beehive, its tube looking like a huge bird's nest, enclosed by a pile of geyserite resembling a beehive, three feet high and about four feet in diameter. Nearby is a vent from which steam, escaping a few minutes before the eruption, gives notice

of its coming. The water column shoots up two hundred feet, with clouds of steam, but it is quite uncertain, spouting once or twice in twenty-four hours, and usually at night. Behind the Beehive are the Lion, the Lioness, and their two Cubs, and to the eastward of the latter the Giantess. The Lion group has only uncertain and small action, while the Giantess is on the summit of a mound fifty feet high, with a depressed crater, measuring eighteen by twenty-four feet, and usually filled with dark-blue water. This is the slowest of all the geysers in getting to work, acting only at fortnightly intervals, but each eruption continues the greater part of the day, with usually long-previous notice by violent boiling and internal rumblings. When it comes, the explosion is terrific, the column mounting two hundred and fifty feet, a perfect water-spout the full size of the crater, with a half-dozen distinct jets forced through it. To the northwest of the Lion and across the river is the Castle, so named from the castellated construction of its crater. It stands upon an elevation, the side towards the Firehole falling off in a series of rude steps. The tube is elevated about ten feet within the castle and is four feet in diameter. It is of uncertain eruption, sometimes playing daily and sometimes every other day, throwing a column of one hundred and fifty feet, falling in a sparkling shower, continuing about forty minutes, and then tapering off in a series of insignificant spurts. The

Saw-Mill is not far away, rather insignificant, its tube being only six inches in diameter, set in a saucer-like crater about twenty feet across; but its water column, thrown forty feet high, gives the peculiar sounds of a saw, caused by the action of puffs of steam coming out alternately with the water jets. It generally acts in unison with the Grand Geyser, a quarter of a mile northward, which goes off about once a day. The Grand Geyser in action is most powerful, causing the earth to tremble, while there are fearful thumping noises beneath. The water in the crater suddenly recedes, and then quickly spurts upward in a solid column for two hundred feet, with steam rising in puffs above. The column seems to be composed of numerous separate jets, falling back with a thundering sound into the funnel. The outburst continues a few minutes, stops as suddenly as it starts, and is repeated six or eight times, each growing less powerful. Along the river bank nearby are the Wash Tubs, small basins ten feet in diameter, each with an orifice in the bottom. If the clothes are put in, the washing progresses finely until suddenly out goes the water, and with it all the garments, sucked down the hole. After awhile the basin fills again, and back come the clothes, though sometimes they are very dilatory in returning. The Devil's Well, about fifty feet away, is usually accused of complicity in this movement. It is a broad and placid basin of hot water, with a

beautiful blue tinge, in which tourists sometimes boil their eggs and potatoes. It is sentinelled by the Comet Geyser, exploding several times daily, but through an orifice so large that it does not throw a very high column.

The great geyser of this Upper Basin is the Giant. It has a broken cone set upon an almost level surface, with the enclosing formation fallen away on one side, the interior being lined with brilliant colors like a tessellated pavement. It is somewhat uncertain in movement, but usually goes off every fourth day. It gives ample notice, certain "Little Devils" adjoining, and a vent in the side of the crater, boiling some time before it sends up the enormous column which plays ninety minutes. The outburst, when it starts, comes like a tornado, and the stream from it runs into and more than doubles the current of the river. The column is eight feet in diameter, rises two hundred and fifty feet at first, and is afterwards maintained at two hundred feet. There is a deafening noise, and the steam clouds seem to cover half the valley. The column goes up perfectly straight, and falls back around the cone with a deluge of hot water. The Catfish, a small geyser, is nearby, and to the northward a short distance is the Grotto. This is an odd formation, its crater perforated with orifices around a low, elongated mound, which point in different directions; and when it goes off at six-hour intervals, the eruption is by streams at an angle,

giving a curious sort of churning motion to the water column, which rises forty feet, continuing twenty minutes. The Riverside has a little crater on a terraced mound just at the river's edge, and is a small, irregular but vigorous spouter, throwing a stream sixty feet. The Fan has five spreading tubes, arranged so that they make a huge fan-like eruption, one hundred feet high in the centre, this display, given three or four times a day, continuing about fifteen minutes. The Splendid plays a jet two hundred feet high every three hours, continuing ten minutes, and may be spurred to quicker action. The Pyramid and the Punch Bowl are geysers that have ceased operations. The former is now only a steam-jet, and the latter, on a flat mound, is an elegant blue pool, elevated several feet, and having a serrated edge. The Morning Glory Spring, named from its resemblance to the convolvulus, is a beautiful and most delicately tinted pool. The investigators of these geysers have been able to get the temperature at a depth of seventy feet within the tubes, and find that under the pressure there exerted the boiling-point is 250°. Upon this fact is based the theory of the operation of the geyser. The boiling-point under pressure at the bottom of a long tube being much higher than at the top, the expansive force of the steam there suddenly generated drives out violently the water above it in the tube, and hence the explosive spouting.

YELLOWSTONE FALLS AND CANYON.

The National Park, besides the extraordinary geyser and hot-spring formations exhibits the grand scenery of the Yellowstone Falls and Canyon. The Yellowstone River has its source in Bridger Lake, to the southeast of the Park, and flows northward in a broad valley between generally snow-capped mountain ridges of volcanic origin, with some of the peaks rising over eleven thousand feet. It is a sluggish stream, with heavily timbered banks, much of the initial valley being marshy, and it flows into the Yellowstone Lake, the largest sheet of water at a high elevation in North America. This lake has bays indented in its western and southern shores, giving the irregular outline somewhat the appearance of a human hand, and there are five of them, called the "Thumb" and the "Fingers." The thumb of this distorted hand is thicker than its length, the forefinger is detached and shrivelled, the middle finger has also been badly treated, and the much swollen little finger is the biggest of all, thus making a very demoralized hand. The trail eastward over from the Upper Firehole Geyser Basin comes out on the West Thumb of the lake, mounting the Continental Divide on the way, and crossing it twice as it makes a curious loop to the northward, the second crossing being at eighty-five hundred feet elevation, whence the trail descends to the West Thumb. Yellowstone Lake is at seventy-

seven hundred and forty feet elevation, and covers about one hundred and fifty square miles, having a hundred miles of coast-line. The scenery is tame, the shores being usually gentle slopes, with much marsh and pine woods. Islands dot the blue waters, and waterfowl frequent the marshes. The most elevated portion of the immediate environment is Flat Mountain, on the southwestern side, rising five hundred feet, but beyond the eastern shore are some of the highest peaks of the Park, exceeding eleven thousand feet. Hot springs adjoin the West Thumb, and there is an actual geyser crater in the lake itself. Towards the northern end the shores gradually contract into the narrow and shallow Yellowstone River, which flows towards the northwest after first leaving the lake, having occasional hot springs, geysers, paint pots and steam jets at work, with large adjacent surfaces of geyserite and sulphur. The chief curiosity in operation is the Giant's Cauldron, boiling furiously, and with a roar that can be heard far away. The pretty Alum Creek is crossed, its waters, thus tainted, giving the name. South of this the Yellowstone is generally placid, winding for a dozen miles sluggishly through prairie and timbered hills, but now it contracts and rushes for a mile down rapids and over pretty cascades to the Upper Fall.

Restricted to a width of but eighty feet, the river shoots far over this fall, the current being thrown outward, indicating there must be room to pass be-

hind it. The fall is one hundred and twenty feet, and suddenly turning a right angle at its foot, the stream of beautiful green passes through a not very deep canyon. The appearance of the surrounding cliffs is quite Alpine, though the rocks forming the cascade constantly suffer from erosion. About a half-mile below is the great Lower Falls of the Yellowstone. Before reaching it, a little stream comes into the river over the Crystal Fall, about eighty feet high, rushing down a gorge forming a perfect grotto in the side of the canyon, extending some distance under the overhanging rocks. The surface of the plateau gradually ascends as the Lower Falls are approached, while the river bed descends, and this makes a deep canyon, brilliantly colored, generally a light yellow (thus naming the river), but in many portions white, like marble, with patches of orange, the whole being streaked and spotted with the dark-gray rocks, whose sombre color in this region is produced by atmospheric action. The river rushes to the brink of the Lower Fall, and where it goes over, the current is not over a hundred feet wide, the descent of the cataract being about three hundred feet, and the column of falling waters dividing into separate white streaks, which are lost in clouds of spray before reaching the bottom. Only a small amount of water usually goes over, about twelve hundred cubic feet in a second. Before the plunge the water forms a basin of dark-green color, and both blue and green

tints mingle with the prevailing white of the cascade. Towards sunset, when viewed from below, there are admirable rainbow effects. The river is quite narrow as it flows away along the bottom of the canyon, which now becomes deep and large. The grand view of this beautiful picture is from Point Lookout, a half-mile below the falls. Unlike any other of the world's great waterfalls, this cascade, while a part, ceases to be the chief feature of the scene. It is the vivid coloring and remarkable formation of the sides of the canyon that make the chief impression. These change as the sun gives light and shadow, the morning differing from noon and noon from night. It is impossible to reproduce or properly describe the beautiful hues in this wonderful picture. The prevailing tint is a light yellow, almost sulphur color, with veins of white marble and bright red streaked through it. The colors blend admirably, while the cascade in the background seems enclosed in a setting of chocolate-brown rocks, contrasting picturesquely with the brighter foreground. Throughout the grand scene, great rocky columns and pinnacles arise, their brilliant hues maintained to the tops, and the scattered pines clinging to these huge columnar formations give a green tinge to parts of the picture. The *débris*, forming an inclined base about half-way down, is colored as brilliantly as the rocks above, from which it has fallen. In the view over the canyon from Point Lookout, the contracted white streak

of the cascade above the spray cloud is but a small part of the background, while the river below is only a narrow green ribbon, edged by these brilliant hues. Some distance farther down the canyon, another outlook at Inspiration Point gives a striking view from an elevation fifteen hundred feet above the river of the gorgeous coloring of the upper canyon.

This grand Canyon of the Yellowstone extends, as the river flows, a distance of about twenty-four miles. It is a depression in a volcanic plateau elevated about eight thousand feet above the sea, and gradually declining towards the northern end of the canyon. Above the Upper Fall the river level is almost at the top of the plateau, and the falls and rapids depress the stream bed about thirteen hundred feet. About midway along the canyon, on the western side, is Washburne Mountain, the surface from it declining in both directions, so that there the canyon is deepest, measuring twelve hundred feet. Across the top, the width varies from four hundred to sixteen hundred yards, the angle of slope down to the bottom being fully 45°, and often much steeper, in some cases almost perpendicular where the top width is narrowest. This Grand Canyon is the beautiful beginning, as it were, of the largest river in the world,—the Missouri and the Mississippi. Upon the trail in the southern part of the National Park which goes over from the Firehole River to the West Thumb, and at quite an elevation upon the Continental Divide, there

is a quiet little sheet of water, having two small streams flowing from its opposite sides. To the eastward a babbling brook goes down into the West Thumb of the Yellowstone Lake, while to the southwest another small creek flows over the boulders towards Shoshone Lake. This scanty sheet of water, properly named the Two-Ocean Pond, actually feeds both the Atlantic and Pacific Oceans. The one stream gets its outlet through the Mississippi and the other through the Columbia River of Oregon.

WESTWARD THE COURSE OF EMPIRE.

Here, in the Yellowstone National Park, with the waters flowing towards both the rising and the setting sun, is the backbone of the American Continent. Beyond it the country stretches through the spacious Rocky Mountain ranges to the Pacific. What is herein described gives an idea of the vast empire ceded to the United States by France in the early nineteenth century, and this Great Northwest is gradually becoming the masterful ruling section of the country. When Bishop Berkeley, in the early eighteenth century, sitting by the Atlantic Ocean waves at Newport, composed his famous lyric on the "course of empire," he little thought how typical it was to become more than a century after his death. He was musing then "On the Prospect of Planting Arts and Learning in America." The Arts and the Learning have had vigorous American growth, but his Muse predicted

a greater empire than any one could have then imagined.

"The Muse, disgusted at an age and clime
Barren of every glorious theme,
In distant lands now waits a better time,
Producing subjects worthy fame.

"In happy climes, where from the genial sun
And virgin earth such scenes ensue,
The force of Art by Nature seems outdone,
And fancied beauties by the true;

"In happy climes, the seat of innocence,
Where Nature guides and Virtue rules,
Where men shall not impose for truth and sense
The pedantry of courts and schools;

"There shall be sung another golden age,
The rise of empire and of arts,
The good and great inspiring epic rage,
The wisest heads and noblest hearts.

"Not such as Europe breeds in her decay;
Such as she bred when fresh and young,
When heavenly flame did animate her clay,
By future poets shall be sung.

"Westward the course of empire takes its way;
The four first acts already past,
A fifth shall close the drama with the day;
Time's noblest offspring is the last."

END OF VOLUME I.